IN THE

United States Circuit Court of Appeals,

FOR THE NINTH CIRCUIT.

Otis Elevator Company,

Plaintiff-Appellant and Cross-Appellee,

US.

Pacific Finance Corporation and Llewellyn Iron Works,

Defendants-Appellees and Cross-Appellants.

BRIEF FOR DEFENDANTS.

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No. 6996.

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BRIEF FOR DEFENDANTS.

STATEMENT OF THE CASE.

This is a suit in equity brought in the Southern District of California by Otis Elevator Company against Pacific Finance Corporation and Llewellyn Iron Works for alleged infringement of Reissue Letters Patent No. 16,297, entitled, "Control For Electric Elevators." The cause was referred for trial before a special master. On February 25, 1930, the special master filed a report recommending that a decree be entered finding that claims 3, 22, 29, 40, 41 and 65 of the patent are valid; that claims 3, 22, 29, 40

and 65 are infringed by defendants; that claim 37 is invalid, and that claim 41 is not infringed. The defendants filed exceptions to the report of the special master. No exceptions were filed by the plaintiff.

The cause was orally argued before the court on October 15, 1930 on defendants' exceptions, and submitted on briefs. On May 1, 1931, the plaintiff filed a disclaimer in the United States Patent Office as to claim 37. A motion was then made by defendants to dismiss the case on the ground that the plaintiff had unduly delayed the filing of its disclaimer. This motion was based on the decision of the Supreme Court in *Ensten v. Simon Ascher & Co.*, 282 U. S. 445 (75 L. ed. 453), decided February 2, 1931. The motion to dismiss was argued to the court and taken under submission.

On October 2, 1931, Judge James rendered his written opinion, finding that the patent in suit could be sustained only by limiting the claims to the particular forms of structure described in the patent; finding that the defendants had not infringed the patent so construed; and denying the motion to dismiss based on the delay in filing the disclaimer. A final decree of dismissal was rendered in this cause on November 30, 1931. Following the practice approved by this Court in Parker v. St. Sure, 53 Fed. (2d) 706, an order was entered adopting the written opinion of the court as the findings of fact and the conclusions of law in this cause. The findings of fact and conclusions of law of the special master were not adopted or approved. It follows that the findings of fact and conclusions of law made by the court—not those of the master as urged by the plaintiff—are presumptively correct on this appeal.

Plaintiff has appealed from the decree below and assigns as error the findings, that the claims may be sustained only if limited to the particular forms of structure shown in the patent in suit, and that the claims are not infringed by the control system for elevators used by defendants and complained of herein. The defendants have taken a cross-appeal and assign as cross-errors the findings below that the claims are valid at all, and the denial of the motion to dismiss based on the delay of the plaintiff in filing its disclaimer as to claim 37. The cross-appeal may be superfluous. Defendants can urge the cross-assignments of error on plaintiff's appeal.—

Walker on Patents (6th Ed.) pp. 772, 774; Electric Gas Lighting Co. v. Fuller, 59 Fed. 1003 (C. C. A. 1st Cir.);

Crown Cork and Seal Co. v. Aluminum Stopper Co., 108 Fed. 845 (C. C. A. 4th Cir.);

United States Consolidated Seeded Raisin Co. v. Selma, 195 Fed. 264 (C. C. A. 9th Cir.)

The cross-appeal was taken solely to preclude any argument that the defenses to which the cross-assignments of error relate are before this Court for consideration. Accordingly, an order was entered in this cause on January 3, 1933, by the Senior Circuit Judge, granting leave to defendants to include in this brief the argument on the cross-assignments of error.

The Issues.

The problem of controlling high-speed passenger elevators has assumed new proportions in recent years. The speed of elevators has increased with the increase in the height of buildings [R. 52] and has now reached the

point where an operator in a car does not have time to distinguish a particular floor and bring the car manually to a proper stop [R. 194]. When this point was reached, the obvious thing to do was to stop the elevator automatically. Automatic-stopping push-button elevators were well-known in the art. They have been used in slow-speed apartment-house elevators for many years. They had not been used in high-speed office-building elevators because the art knew no means by which such high-speed elevators could be accurately slowed down to stop level with a floor landing.

The patentee of the patent in suit was not skilled in the elevator art. He says that the idea came to him of stopping an elevator by a push-button on the occasion of a visit to a hotel in Detroit, when he was annoyed because the elevator did not stop for him in response to a pushbutton. If he had known the elevator art, he would have been aware that elevator engineers knew full well how to automatically stop an elevator car from a push-button. Apartment-house elevators of this kind had been running in this country for many years. He would also have known that the reason passenger elevators in the larger office-buildings were constructed so that the pushbuttons would signal the operator to stop the car, but would not automatically stop the car, was because no means had yet been invented whereby an elevator moving at high speed could be automatically slowed down so as to stop level with the floor. For this reason, automatic push-buttons had only been used in relatively slow-moving elevators, such as were found in apartment-houses, where the traffic in the elevator was not great.

Parker did not stop to learn these things, but rushed to a patent attorney and they drew up the form of elevator control, illustrated in the patent in suit, purely as an hypothesis. They asserted in the patent in suit that they could automatically stop the car level with the floor from the push-button, but in so asserting either had in mind that their invention would be used only in slow-speed elevators, or they were mistaken. They made no test and the patentee admitted at the trial of this case that he did not then know whether the apparatus shown in his patent would operate. The patent is purely a paper patent. It is claimed by plaintiff to be responsible for the modern type of automatic-stopping high-speed elevators, but this is not true.—

"And here it may be stated that neither the control system of Parker, nor any of those included in inventions theretofore made, were adapted to the operation of fast moving elevators such as are necessary to be used in buildings containing many stories, like the modern sky-scraper." [Judge James,— R. 640.]

The brief for plaintiff entirely misrepresents to this Court the alleged invention of the patent in suit. Plaintiff says that the patent is to be broadly construed, because Parker, a non-member of the elevator industry, was the first to solve the problem of automatically stopping high-speed passenger elevators. This is not true. Such problem, if it was a problem, was not solved by Parker. The mechanism disclosed in the patent in suit could not be used in a high-speed elevator and is for many reasons inoperative and lacking in utility, even if employed in a slow-speed, apartment-house elevator. Plaintiff has encumbered the record with exterior pictures of buildings

which have been equipped with plaintiff's so-called "Signal Control" elevators. These are said to be the elevators of the patent in suit. This is not true, as found by the lower court.—

"Parker never constructed or had constructed an installation demonstrating his system; neither does it appear that the plaintiff here, who purchased his patent, has ever used it in the form taught and specified in the patent." [R. 641.]

Plaintiff says that this fact is not material in this case (Pl'ffs Br., p. 122). Counsel have overreached themselves here. One of the counsel whose name appears on Plaintiff's Brief, is a much respected former judge of this Court. In *Henry v. City of Los Angeles*, 255 Fed. 769, he considered the effect of this precise fact on the interpretation to be given to the patent there in suit and, in writing the opinion of this Court, said:—

"It is also to be considered that there never has been a water wheel governor constructed in accord with the drawings and specifications of the patent in suit—that is, a governor constructed and using all the principles of governing revealed in the patent. The Court of Appeals of the Sixth Circuit in National Malleable Castings Co. v. Buckeye M. I. & C. Co., 171 Fed. 847, 96 C. C. A. 515, said:

"'The use we make of the fact that the device has never gone into actual service is in the construction or interpretation of the patent. We are justified, in view of the facts of this case, in exercising much caution in attributing to this patent anything more than is plainly shown and distinctly claimed. * * * This inference from nonuse, under the circumstances, is the converse of the inference drawn with respect of

a doubtful patent when a showing is made that it has gone into large use and has displaced other devices. It is an inference against utility from the fact of long nonuse, unexplained by want of means or opportunity."

This rule was there applied although the plaintiff contended that the rule did not apply because devices had been constructed under and within the claims of the patent, although admittedly not in accord with the specification and drawings.

That Parker made no such invention as plaintiff here represents, is further corroborated by plaintiff's conduct. The application for the original patent was filed April 25, 1921. In 1922 it was submitted by Parker to plaintiff [R. 76, 97]. No attention was paid by plaintiff to the patentee or to his alleged invention until the fall of 1925, after the original patent had issued and plaintiff had learned of the installation by defendants in Los Angeles of an elevator of the type complained of herein [R. 423]. The patent was then purchased by plaintiff for the purpose of obtaining a reissue to suppress the defendants' elevators [R. 79, 98]. In the meantime plaintiff had independently developed its own separately patented, socalled "Signal Control" system and had installed the same in the Standard Oil Building in New York City. Parker admits he had no part in the development of this Signal Control system [R. 97]. Plaintiff owned no interest in Parker's alleged invention until after its Signal Control system had been developed and installed [R. 97]. Plaintiff admits that prior to any alleged invention by Parker its own engineers had considered the automatic stopping of high-speed passenger elevators and that the obvious way

to do so was by push-buttons at the floors and in the cars [R. 228, 263, 266]. The work was delayed because of the press of other business [R. 263]. The features in plaintiff's Signal Control system which enable a highspeed passenger elevator to be automatically slowed down and stopped are covered by numerous other patents obtained by plaintiff, not here in suit, and at the trial of this cause plaintiff stipulated that these embodied inventions apart from the Parker patent in suit [R. 199, 200, 257, 260]. Plaintiff did not consider Parker had contributed anything of substantial value. It refused to pay him five thousand dollars [R. 98]. Plaintiff purchased the entire title to the alleged Parker invention for the sum of two thousand dollars [R. 98]. This is indeed "a small sum of money," as stated by Judge James, for a patent under which plaintiff pretends to have manufactured thirty-three million dollars worth of elevators! The patent was purchased only as a speculation, to be used by plaintiff as the basis for this litigation.

The master reached the erroneous conclusion that Parker had made a broadly new invention. The patent in suit states that the only change in an elevator contemplated by Parker is in the control switch situated within the car.—

"No fundamental change is contemplated in the driving or starting mechanism of the system, but only in the master control switch situated within the car itself." (Patent, p. 1, lines 49-53.)

This change consisted in so constructing the car-switch that the operating lever 3 could be returned to neutral independent of the contacts 9 and 9′ and the addition of magnets having coils 32 and 32′ to hold the contacts 9 and

9' in closed position and coils 37 and 37' to release the contacts 9 and 9' on completion of the push-button circuits. This being the only change made by Parker in an elevator, any invention in the patent must reside in this change. This is the only means disclosed in the patent for automatically stopping the car in response to push-buttons. Neither the plaintiff nor the defendants use any such means. It would be impossible to use such a means with high-speed elevators. The master found that this means was a step backward, and not an advance, in the art.—

"The actual form of his car switch is possibly a new form of a self-holding switch but it is evident that his form of switch was not an improvement. It was but a crude conception when compared with older means. At that time engineers had learned to put as many of the control circuits as possible in the pent-house and not in the car. It would be a step backward to bring the secondary circuits through the car."

[Master's Report,— R. 562.]

This finding removes any possibility of any broadly meritorious invention in the patent.

The conclusion of the master that Parker made a broadly new invention was predicated upon the erroneous finding of the master that there was no means in the prior elevator art for holding the running circuits closed independently of the car-switch and means for releasing the running circuit to stop the car automatically [R. 567]. Such a means is specifically disclosed in the prior patents to Ihlder and Strohm, as we shall demonstrate in this brief. Judge James specifically reversed the finding of the master that there was any broadly new invention in the patent in suit.—

"On the record presented, to which I have given careful and painstaking study, I am totally unable to agree with the master; my conclusion, to the contrary, is that when Parker conceived his invention, the art of elevator control by electrical means, if not already crowded, was certainly well occupied. Considering his elements separately, there was nothing at the time new in the use of push buttons at the floors or in the car which would operate through electrical magnets to connect and disconnect the current feeding the hoisting motor; there was nothing new in a selector means moving synchronously with the elevator car to make and break auxiliary circuits; there was nothing new in a circuit arrangement by which push buttons would be reset after being operated through coil wound magnets. At the time Parker conceived his invention, the type of electrically controlled elevators, such as is common in apartment houses and some business buildings, whereby, by means of push buttons at floor landings and in the car, the elevator can be started and will be stopped automatically, was in common use." [R. 638.]

The master reached the conclusion that the defendants' elevators infringe the patent in suit. He reached this erroneous conclusion because he first mistakenly found that there was a broadly new invention in the patent in suit, and, having made that finding, made the second mistake of in effect holding that any means which would perform the function of automatically breaking the running circuit to stop the car would be an infringement of the patent. Irrespective of the breadth of the invention, it was an error of law to conclude that any elevator control which would perform this function was an infringement of the patent. In the leading case of *Westing*-

house v. Boyden Power Brake Co., 170 U. S. 537, 42 L. ed. 1136, the Supreme Court held that even a pioneer patent for a machine is not infringed because the machine of the defendant performs the same function, unless accomplished by substantially the same or similar means as those described in the patent. In that case Mr. Justice Brown said:-

"The difficulty we have found with this claim is this: That, if it be interpreted simply as a claim for the function of admitting air to the brake cylinder directly from the train pipe, it is open to the objection, held in several cases to be fatal, that the mere function of a machine cannot be patented. (p. 1143.)

* * * * * * * *

"To what liberality of construction these claims are entitled depends to a certain extent upon the character of the invention, and whether it is what is termed in ordinary parlance a 'pioneer.' * * * At the same time, as hereinafter observed, this liberality must be exercised in subordination to the general principle above stated: that the function of a machine cannot be patented, and hence, that the fact that the defendants' machine performs the same function is not conclusive that it is an infringement. (pp. 1145-6.)

"But, after all, even if the patent for a machine be a pioneer, the alleged infringer must have done something more than reach the same result. He must have reached it by substantially the same or similar means, or the rule that the function of a machine cannot be patented is of no practical value."

(p. 1148.)

Because he found no invention in the patent except when limited to the particular form of structure therein described, Judge James held that the scope of the patent and the range of equivalents allowed must be restricted narrowly to means which substantially embody the things described and specified in the patent, saying:—

"Hence, it must be determined that this patentee, insofar as his system exhibits invention, is limited closely to the form and structure described, and that the range of equivalents allowed to him is restricted narrowly to those which substantially embody the things that he describes and specifies." [R. 639.]

The rule applied by Judge James is in exact accord with the decision of this Court in Randall Control & Hydrometric Corp. v. Elevator Supplies Co., 15 Fed. (2d) 767, in which this Court settled the rule to be followed in this Circuit in interpreting the scope of patents in this art. The apparatus involved in that case is in fact included in the defendants' elevators and is part of the structure asserted here to infringe the patent in suit. The court below had found infringement for the reason primarily that the defendant's system performed the same functions as the patent there in suit. In reversing the decree in that case, Judge Hunt said:—

"Nor do we think that the single master switch used by the appellant should be held to be merely the equivalent of Newell's stops on his hatch gate. The results produced by Newell and by appellant are the same, but the mechanism and operation are substantially different, and, in the light of the state of the art when Newell's invention was patented, we think that the rules applicable to strict construction must guide us. Miller v. Eagle Mfg. Co., 151 U. S. 208, 14 S. Ct. 310, 38 L. Ed. 121; McCormick v. Talcott, 20 How. 402, 15 L. Ed. 930; Elevator Supplies Co.

v. Boedtcher (C. C. A.), 11 F. (2d) 615; Goodyear, etc., Co. v. Davis, 102 U. S. 222, 26 L. Ed. 149." (P. 769.)

Plaintiff here contends that the defendants' elevators infringe because they perform the function of automatically stopping in response to push-buttons. This is fundamentally unsound in law. The idea of automatically stopping in response to push-buttons could not be patented, even if it were new with Parker (which it is not). He could only patent the means which he devised by which that function could be accomplished.—

"Patents for a machine will not be sustained if the claim is for a result, the established rule being that the invention, if any, within the meaning of the Patent Act, consists in the means or apparatus by which the result is obtained, and not merely in the mode of operation, independent of the mechanical devices employed; nor will a patent be held valid for a principle or for an idea, or any other mere abstraction." (Fuller v. Yentser, 94 U. S. 288, 24 L. ed. 103.)

"We find here no authority to grant a patent for a 'principle' or a 'mode of operation', or an idea, or any other abstraction. A machine is a concrete thing, consisting of parts, or of certain devices and combination of devices. The principle of a machine is properly defined to be 'its mode of operation,' or that peculiar combination of devices which distinguishes it from other machines. A machine is not a principle or an idea. The use of ill-defined abstract phraseology is the frequent source of error. It requires no great ingenuity to mystify a subject by the use of abstract terms of indefinite or equivocal meaning. Because the law requires a patentee to

explain the mode of operation of his peculiar machine, which distinguishes it from others, it does not authorize a patent for a 'mode of operation as exhibited in a machine.' Much less can any inference be drawn from the statute, that an inventor who has made an improvement in a machine, and thus effects the desired result in a better or cheaper manner than before, can include all previous inventions, and have a claim to the whole art, discovery, or machine which he has improved. All others have an equal right to make improved machines, provided they do not embody the same or substantially the same devices or combination of devices, which constitute the peculiar characteristic of the previous invention."

(Burr v. Duryec, 1 Wall. 531, 17 L. ed. 650, at 657.)

Pursuant to these fundamental principles of patent law, Judge James held that the determination of the issue of infringement depends upon "the necessary comparison between the Parker system and the one as to which the charge of infringement is based" [R. 644]. This is true whether the patent be strictly construed (within the rule of Randall Control & Hydrometric Corp. v. Elevator Supplies Co., followed by Judge James) or be given the widest interpretation of a pioneer patent (as in Westinghouse v. Boyden Power Brake Co.) The patent cannot be infringed, no matter what its breadth may be, unless the defendants' elevators employ substantially the same means, to perform the same function, in substantially the same way.

Plaintiff says in its brief that Judge James found that the master's report properly describes the operation of defendants' system. This is not so. The master made a fundamental mistake as to how the defendants' system operates, and this mistake was recognized and corrected in the opinion of Judge James [R. 642]. The sentence from the opinion of Judge James relied upon by the plaintiff as approving the master's description of the operation of defendants' system is followed by a detailed statement by Judge James as to wherein the master was in error concerning how the defendants' system operates.

The master found that the completion of the circuit through the push-buttons and 2U or 2D switches in the defendants' system breaks the holding circuit to initiate the stopping of the car and that these stopping circuits and circuit-closing means are equivalent to the means disclosed by Parker. Judge James correctly finds in his opinion that the completion of the circuit through the push-buttons and 2U or 2D switches in defendants' system does not break the holding circuit to initiate the stopping of the car, but that the holding circuits and running circuits are opened by the 4MS switch on the leveling drum No. 4 [R. 643]. The operation of defendants' system depends upon maintaining the holding and running circuits closed until after the car has stopped. It is not stopped by the completion of circuits from the push-buttons through the floor selector opening the holding or running circuits.

Judge James made a careful comparison between the means disclosed in the Parker patent and those employed in defendants' elevators, and found that there was no similarity or substantial identity whatsoever between them. He found that the means employed by the defendants are so essentially and entirely different from those described in the patent that any attempt to modify the

means described in the patent to correspond to those employed by the defendants would result in utterly changing, obliterating and losing all the essential means of the patent, saying:—

"Before referring particularly to the exceedingly complicated mechanism of the defendants' elevators, which are claimed to embody infringement of the Parker patent, it may be stated that I am unable to conclude that the Parker system could by any reasonable modification be transplanted into the elevator control system of the defendants; any attempt so to do would result in the essential means described by Parker being utterly changed, obliterated and lost so that no substantial identity could be ascribed to the resulting combination." [R. 640-1.]

It is legally impossible to hold that the defendants' system infringes the patent in suit, if this finding stands. Plaintiff in its brief makes no attempt to show that this finding is wrong. Plaintiff goes no further than to assert that the claims in suit in words read on the defendants' elevators. This is possible only because the claims are purely functional in character. The fact that defendants' elevators may have some means for performing the functions recited in the claim does not show that the defendants' elevators have the means claimed in the patent or their equivalents. An equivalent must perform the same function in substantially the same way. Plaintiff has not and cannot show that the "means" employed in defendants' elevators are similar to or operate in substantially the same way as the "means" described in the patent. Judge James found there was no similarity whatever. Court has many times ruled that infringement is not established merely because claims read in terms on the

defendant's device, and that where the claims are in the form of those in issue here, the term "means" in the claim is limited to the means described in the patent.—

"To permit a patentee to burden his claims by the use of indefinite language would lead to supporting him in a monopoly of a principle or result, which would bar other inventors from arriving at the same result by different means. In Walker on Patents, Section 117a, p. 137, the author says:

"Where some of the parts of a combination operate therein to give motion to other parts which do the final work of the combination, it is proper to specify the former by the use of such terms as 'means,' 'mechanism,' or 'devices' for giving that motion, except when these terms are applied to an element or part which constitutes the essence of the invention. If they are used under such circumstances, the claim will be regarded as functional. But such general language will not include all means, mechanism, or devices which can perform that function, but only those which are shown in the patent and their equivalents. And in this case, also, the question whether other means, mechanism, or devices are equivalents to those shown in the patent will be determined by the established rules on that subject, rather than by any apparent precision or elasticity of the language used in the claims to designate the parts involved in the inquiry."

(Henry v. City of Los Angeles, 255 Fed. 769, at 779.)

Plaintiff has accused us of wilfully complicating and confusing the issues of this case because we have and do insist that a comparison must be made of the structures involved to determine the issues of validity and infringement. Judge James has correctly interpreted the law in

the statement in his opinion that anyone who essays to determine these issues must make the necessary comparison between the structures described in the patent in suit and defendants' alleged infringing elevators. In his opinion Judge James refers to the complexity of the system, as follows:—

"An understanding of the design and working of the Parker invention can be quite readily understood, because it is comparatively simple. An understanding of the complicated apparatus used in the defendants' installation requires concentrated effort of many hours duration and involves the examination of a multitude of schedules and drawings. It is impossible to follow in detail a description of defendants' elevator system without resort to the drawings and schedules,—hence a closely particularized description cannot be set forth in any opinion unless the formal data referred to is made a part of it. [R. 634.]

"I have arrived at an understanding of the complicated picture by close and arduous study, more study in fact than I have found necessary to devote to any case presented during my experience on the bench. It will not be useful now or helpful to an Appellate Court for me to attempt here to analyze the system at length. Any judge who essays the necessary comparison between the Parker system and the one as to which the charge of infringement is based, will have before him the same task that I had."

[R. 643-4.]

We have throughout this case and will continue to present the issues in the simplest and clearest manner of which we are capable. The structures involved in this case are complex, and to comprehend them involves a long and tedious study. They can be understood only from

diagrams of electrical circuits which are ordinarily expected to be understood only by skilled elevator engineers, and not by the layman. The master in his report says of these diagrams:—

"It is only with the assistance of expert engineers that the lay mind can reach an understanding of the simpler diagrams. Plaintiff's Exhibit 4-X illustrates the extreme complexity of the whole structure."

[R. 576.]

This difficulty apparently led the master to his erroneous finding as to how the defendants' elevators operate. Plaintiff's experienced elevator engineer and expert witness testifies that it took him about two weeks to understand the diagrams of the defendants' elevators and he doubts if anyone could do so in less time [R. 151].

We fully appreciate the enormity of consideration that this case requires of this Court. We have no fear but what this Court will come to an understanding of the structures involved, as did the court below. It is natural for plaintiff to say that this cause should not be complicated by a comparison of the structures involved, because plaintiff cannot hope to prevail if such a study be made. The issues here cannot be correctly determined, or justice done, unless the study made by Judge James is repeated by this Court.*

The structures involved in this case are composed primarily of numerous electrical circuits. We have found that the best way to understand these circuits is to consider them one at a time. It is difficult to understand a particular circuit from a drawing in which it is entangled with a maze of other circuits. We find it much simpler to use separate diagrams for the various circuits under con-

^{*(}except if the Court sustain our defense that the cause should be dismissed because of the delay of plaintiff in filing a disclaimer as to claim 37 after the decision of the master finding that claim invalid. This involves an issue of law only.)

sideration. For this purpose we have reproduced at the end of this brief a number of individual diagrams, comprising the separate circuits, to which attention is directed in the course of this brief. These are exact reproductions from the drawings and diagrams printed in the Two Volumes of the "Book of Exhibits", where the same circuits appear, with the same reference characters, but complicated by the presence of other circuits.

The decree in this case may well be affirmed solely on the defense sustained by the court below, in which event it is unnecessary to consider and determine the remaining defenses. The defense sustained below is fully supported by two findings of fact made by Judge James:

- (1) that the novelty and invention in the patent in suit is limited closely to the form and structure described, and
- (2) that there is no similarity whatsoever between the means employed in the defendants' elevators and the means described in the patent in suit.

These findings are presumptively correct. There is no conflict in the evidence as to the form and mode of operation of the devices in issue. Either of these findings compels the conclusion that the patent in suit has not been infringed. There are a number of other defenses presented by this record. Some of these were overruled below, and some were not passed upon below. The defense sustained by the court below, together with the remaining defenses in the record, are all presented hereinafter in the order in which they may be most readily considered. These may be briefly outlined as follows:—

- (1) The patent in suit is void because it is totally lacking in invention;
- (2) The patent is void because
 - (a) the means described in the patent are inoperative;

- (b) the means described in the patent are lacking in utility;
- (3) There is no infringement because
 - (a) a patent cannot cover every means of performing a function or a combination of functions, and is limited to the means described in the patent and their equivalents;
 - (b) the means employed by defendants are not similar to or the equivalent of the means described in the patent, irrespective of the scope of the invention;
 - (c) the patent must be limited to the particular means described in the patent, because
 - 1st,— the only novel feature in the patent is a particular change in the car-switch structure, and this has never been employed by either the plaintiff or defendants, and, as found by the master, is not an improvement, but a step backward in the art;
 - 2nd,—the patent is a mere paper patent, and no one has ever attempted to make or operate an elevator like that described in the patent;
- (4) The defendants in any event do not infringe claim 3, which is the only claim of the original patent in issue, and in view of the Intervening Rights of defendants they cannot be held to infringe the reissue claims;
- (5) The patent is wholly void, as a matter of law, because the intentional delay of plaintiff in disclaiming claim 37, following the Report of the Special Master that such claim was invalid, bars plaintiff from the curative provisions of R.S.U.S. §4917 and 4922, and the patent in suit is consequently totally void. (*Ensten v. Simon Ascher & Co.*, 282 U. S. 445, 75 L. Ed. 453.)

THE PARKER PATENT.

The brief for plaintiff emphasizes the results that are alleged to have been accomplished by Parker in the patent in suit, and minimizes the means by which such results are accomplished. The results accomplished are not the primary consideration. The thing patented is the particular means devised by Parker by which the result is attained, and it is open to any other inventor to accomplish the same result by other means. This is an elementary principle of patent law. Plaintiff states that Parker invented a "Control" which can be "harnessed" to any car-switch type of lever made before or after the Parker patent (Pl'ffs Br., pp. 24, 25, 26.) By this statement plaintiff attempts to assert that there is described in the Parker patent certain electrical mechanism which can be taken and merely added to any "usual" car-switch elevator and enable that elevator to be stopped automat-Plaintiff does not identify this mechanism in its ically. The evidence shows that the "Control" of the brief. Parker patent could only be employed with an elevator operating at slow speed. The evidence also shows that neither plaintiff nor defendants has employed the "Control" of the Parker patent. It is important, therefore, that the Court have a thorough understanding of the means described in the patent in suit. It is not necessary for us to here repeat the detailed description of those means embodied in the specification and drawings of the patent. We shall mention only the features to which we desire to direct particular attention.

The elevator "Control" described in the patent in suit includes four principal circuits:

- (1) a Primary Circuit;
- (2) a Motor Circuit;
- (3) a Secondary Control Circuit For A Car-Button; and
- (4) a Secondary Control Circuit For A Hall Button.

These circuits we have reproduced in the drawings, Figures 1 to 4, inclusive, of this brief.

The Primary Circuit (Figure 1 of this brief).-

The term "Primary Circuit" is used in the Parker patent to designate the circuits that are closed by movement of the car-switch. The car-switch in the Parker patent is called the Master Control Switch and carries arms 9 and 9' mounted independent of the operating lever 3. These arms are held against the operating lever by the force of the spring 6. The contact arm 9 of the Master Control Switch is intended to bridge the contacts 10 and 11 when the lever 3 is moved to the right. The arm 9 is to be held in this position, when the lever 3 is returned to the neutral position, by the holding coil 32. In the Figure we have shown the position of the car-switch parts as they exist after the lever 3 has been moved to the right to engage the contact arm 9 with the contacts 10 and 11 and then has been returned to the neutral position. Two circuits are closed by this operation.

The first circuit may be traced on the Figure as follows: From the positive main 12 through the line 14, through contacts 10 and 11 bridged by the contact arm 9, through wire 15, through one magnet 16 of the Pole Changing Switch, through the continuation of the line 15 to the negative main 13. In the Figure, we have illustrated only one coil of the Pole Changing Switch, as

only one is employed with the "up" circuit. We have also shown the contacts 20 and 21 of the Pole Changing Switch in the position occupied before the magnet 16 is energized. The function of the first circuit is to energize the magnet 16 of the Pole Changing Switch and move its contacts 20 and 21 into the position shown on Figure 2 of this brief. In such position, as we shall later describe in connection with Figure 2, the poles of the electric motor are connected to the proper mains to energize the motor in the direction to cause the elevator car to travel upwardly.

The second circuit closed by the car-switch energizes the holding coil. This circuit may be traced as follows: From the positive main 12 through the line 14, contacts 10 and 11 bridged by the contact arm 9 of the car-switch, through the holding coil 32, and thence by line 33 to the negative main 13. The coil 32 magnetically holds the contact arm 9 of the car-switch against the contacts 10 and 11 against the force of the spring 6.

The Motor Circuit (Figure 2 of this brief).-

The motor circuit may be traced as follows: From the positive main 12 through the line 25, through contacts 23 and 20 and post 18 of the Pole Changing Switch to the pole 27 of the motor 17, thence to pole 28 of the motor 17, thence through the post 19, contacts 21 and 24 of the Pole Changing Switch, through line 26 to the negative main 13. The operation of the Pole Changing Switch is to connect the poles 27 and 28 of the electric motor in the direction which will cause the elevator motor to move to drive the car upwardly. If the opposite magnet of the Pole Changing Switch has been energized, the arms 20

and 21 would have been thrown in the opposite direction and connected the poles 27 and 28 of the motor to the opposite sides of the line.

The Secondary Control Circuit (Car Button) – (Figure 3 of this Brief).–

The term "Secondary Control Circuits" is used in the Parker patent to designate circuits which include pushbuttons, a floor selector, and a neutralizing magnet to release the car-switch contacts. The circuit illustrated on the Figure is for the second floor "up" car-button. The car-button in the patent is shown as having a pivoting arm b² and the operation of closing the car-button is to move this arm into engagement with the stationary contact d². The circuit also includes a floor selector. A floor selector is a device commonly employed in the elevator art long prior to the alleged Parker invention and has one switch for each floor served by the car so that an individual switch may be closed when the car arrives at a predetermined distance from the floor landing. These selectors are sometimes made by mounting switches in the hatchway and providing a device on the car which closes the switches when the car approaches the floors. They are also made by providing a device in the penthouse which has a traveling arm or carriage and is driven by the car to move this arm or carriage into engagement with certain switches as the car arrives at the different landings. The moving element of the Parker selector is the arm 34. This is illustrated in engagement with the contact f², which is the contact intended by Parker to stop the car at the second floor.

The circuit may be traced as follows: From the positive main 12 through the line 14, contacts 10 and 11 and contact arm 9 of the car-switch, line 35, through the reset coil e² of the "up" car-button, contacts d², b², and c², of the car-button, line h² to the selector contact f², thence through arm 34 to ring g of the selector, line 36, through the coil of neutralizing magnet 37, through the line 38 to the negative main 13. The neutralizing magnet 37 is wound on the same spool as the holding magnet 32, only in the opposite direction, and the effect of energizing the neutralizing magnet 37 is to neutralize the magnetic field of the holding magnet 32. This permits the spring 6 to throw the contact arm 9 of the carswitch to neutral position, opening the primary circuit to disconnect the Pole Changing Switch and shut off the power to the elevator motor.

The Secondary Control Circuit (Hall-Button)
(Figure 4 of this Brief).—

We have illustrated the control circuit for stopping the car by the second floor "up" hall-button. When this button is pressed, it is intended that its contact j^2 be moved into engagement with its stationary contact l^2 . This circuit likewise includes the contact f^2 of the floor selector and the neutralizing coil or magnet 37. The circuit may be traced on the Figure as follows: From the positive main 12 through line n^2 , through the reset magnet m^2 of the hall push-button, through the post k^2 and contacts j^2 and l^2 of the hall-button, through the line o^2 to contacts p^2 and post c^2 of the car-button, line h^2 to contact f^2 of the selector, thence by arm 34 to the ring g of the selector, and by line 36 to the coil 37 of the neutralizing magnet and line 38 to the negative main.

The secondary control circuit for the hall-buttons functions similar to the secondary control circuit for the carbuttons. By energizing the neutralizing magnet 37 to oppose the force of the holding magnet 32, the contact arm 9 of the car-switch is released, permitting the spring 6 to pull the arm back to the "off" position. This opens the primary circuit to disconnect the Pole Changing Switch and shut off the power to the elevator motor.

Mode Of Operation .-

The patent in suit expressly states that the only change contemplated by Parker in an elevator system is in the car-switch (patent, p. 1, lines 49-53). This change consisted in mounting the car-switch contact plates 9 and 9' to move independently of the lever 3; the provision of the holding magnet 32 and neutralizing magnet 37; and connecting the secondary control circuits from the floor selector to the neutralizing magnet 37. Otherwise the mechanism disclosed in the patent in suit is not claimed to differ from the mechanism in elevators in common use prior to any alleged invention of Parker. The running and primary circuits remain the same. The secondary controlling circuits remain the same, except that they are connected to the neutralizing magnet 37 in lieu of being connected to a bell or light in the car. The lever 3 of the car-switch may be returned to neutral without stopping the car, the contact plates 9 and 9' being held in circuit-closing position by the magnet 32.

The car is caused to stop automatically by the secondary control circuit energizing the neutralizing magnet 37. This releases the contact plates 9 or 9' of the car-switch

to open the primary running circuit. Opening the primary running circuit releases the pole-changing switch to interrupt the flow of power to the elevator motor. This is the mode of operation expressly described in the patent in suit.—

"I will now proceed to describe those features of my invention whereby the automatic accurate stopping of the car at a predetermined desired floor level may be attained. This purpose is served by means for holding the switch-arms 4 and 4' in their respective primary control circuit closing positions, with which are associated secondary electric control circuits for releasing the holding means of said switch-arms at proper times; said secondary control circuits being two in number, one serving the ascending travel and the other the descending travel of the car." (patent, p. 3, lines 13-26.)

A secondary controlling circuit completed through the floor selector opens the primary and running circuits to stop the car. This is the sole mode of operation of the mchanism described in the patent in suit. The patent specifically directs that this be the mode of operation.—

"It is intended to retain the positive features of manual control, but to add to such an electrical mechanism which, upon being previously set, will interrupt the main driving or power circuit at predetermined points in the line of travel of the car."

(patent, p. 1, lines 51-57.)

Plaintiff's expert witness Sessions has admitted in his testimony that the only mode of operation described in the Parker patent by which the car is caused to stop automatically in response to a push-button is that upon the completion of a secondary controlling circuit through

the floor selector the car-switch lever is released or unlatched to interrupt the flow of power to the hoisting motor.—

"The only mode of operation disclosed in the Parker specification or the Parker drawing is that upon the circuit being completed through the floor selector, the lever that has been electrically latched in running position is unlatched to interrupt the flow of power to the hoisting motor." [R. 535.]

In other words, upon completion of a secondary controlling circuit all the running circuits are opened forthwith and there is no further flow of current to the elevator motor. This is confirmed by the testimony of Parker [R. 92].

Shutting off the flow of power to the elevator motor will not alone stop a moving car. Some braking means is also required. The patent directs that the "usual braking mechanism" be employed for this purpose.—

"Of course, it will be understood that the timing of the automatic secondary circuit closing means may be so arranged as to allow for the timely operation of the usual braking mechanism to overcome the momentum of the car so that the ultimate point at which the car comes to rest will be in proper alinement with the floor level." (patent, p. 5, lines 22-30.)

The braking means known and used at the time of the Parker patent consisted of brake-shoes, equipped with springs which normally forced the brake-shoes against the elevator motor or some other revolving part. This brake was provided with an electric magnet or magnets which were energized whenever the primary or running circuit was energized, so that the brake would be re-

tracted from the motor. Whenever the primary or running circuit was open, the magnet would be deenergized and the springs apply the brake-shoes to stop the car. Plaintiff's elevator engineer Crabbe illustrated how this brake mechanism would be included in the mechanism described in the patent in suit, following the directions of the patent, by a sketch which appears on Defendants' Exhibit "A" [R. 201-3]. He testifies:—

"That represents a mechanical brake operated by a magnet and released by springs." [R. 202.]

There is no evidence of any other form of braking mechanism in the prior art which the patent contemplates is to be, or which could be, embodied in the mechanism described in the patent. Judge James correctly found:-

"Braking means known and in use at the date of the patent, as I understand the evidence to show, included only a brake which might be operated electrically through a magnet, or by other power, and which would make contact with some of the revolving parts of the motor, or an attachment made therewith, so as to hold the motor in a locked position."

[R. 640.]

The patent in suit does not describe or refer to any means for slowing down the elevator car prior to the application of the brake. The mode of operation described in the patent is solely that the brake is applied simultaneously with the completion of a secondary controlling circuit. There is no foundation whatsoever for the assertion in plaintiff's brief that the patent in suit contemplates the employment of any slow-down mechanism prior to the setting of the brake.—

"This electrical mechanism becomes operative upon the simultaneous fulfillment of two conditions, one condition being the closing of a manually actuated secondary switch, under the control of the operator within the car. or, if desired, under the control of a passenger on a floor level at which the latter desires the car to stop so that he may enter the same, and the other condition being the automatic closing of another secondary switch in the same circuit, which momentarily occurs as the car reaches the desired floor level."

(patent, p. 1, lines 58-70.)

From the foregoing the Court can now understand what the "Control" is that the patent in suit describes, which the plaintiff erroneously asserts could be "harnessed" to any car-switch elevator to stop such elevator automatically. This control consists of the following changes in an ordinary car-switch elevator:—

- (1) Separating the car-switch contacts from the carswitch lever so that the lever can be returned to neutral independent of the car-switch contacts, and the addition of holding and neutralizing magnets so that the car-switch contacts can be electrically latched by the holding magnet in running position, and
- (2) The connection of the well-known floor selector, customarily employed in prior elevators, to the neutralizing magnet to unlatch the car-switch to interrupt the flow of power to the hoisting motor,

having the following mode of operation:-

The completion of the secondary controlling circuit by the floor selector energizes the neutralizing coil 37 to release the car-switch contacts 9 or 9', thereby opening the primary and running circuits, simultaneously shutting off the power to the elevator motor and applying the brake.

We shall later show that none of the changes in prior elevators, stated in the patent to constitute the invention of Parker, are present in defendants' elevators, and that the means employed in defendants' elevators for automatically stopping the same in response to push-buttons are not the means described in the patent and do not operate by the mode of operation described in the patent. We shall show that in defendants' elevators the running circuits which are closed by the car-switch are not opened to stop the car. The stopping of the car in defendants' elevators is dependent upon the running circuits being maintained closed. We shall also show that in defendants' elevators the motor circuit is not interrupted by the floor selector to stop the car. We shall show that the function of the circuits completed through the floor selector in the defendants' system is entirely different from that described in the patent in suit and that the car continues to move under power for more than a floor after those circuits have ceased to exist.

Automatic Stopping Not Primary Object Of Patent .-

Anyone reading Plaintiff's Brief would understand therefrom that the paramount feature of the patent in suit is to be found in automatically stopping the car in response to push-buttons. If permitted to go unchallenged, this would result in a complete misunderstanding of the Parker patent. Automatic stopping of the elevator car in response to push-buttons is mentioned in the patent only as secondary to the primary object of the patent. The patent states that its principal object is to eliminate

the errors made by inexpert operators who bring an elevator car to a stop a few inches above or below the level of a floor.—

"The invention has for its principal object to provide a novel system and means for controlling electric elevators of the general characters above mentioned, which is adapted to eliminate the errors made by inexpert operators, who bring the car to a stop a few inches above or below the proper level, * * *."

(patent, p. 1, lines 39-45.)

Plaintiff totally ignores that this is the primary object of the patent in suit. The only means disclosed in the patent for avoiding inaccurate leveling of the car is that the contacts on the floor selector be so spaced or timed as to cause the brake to be applied when the elevator car is at some predetermined distance from the floor. We shall show that this was the customary means for causing apartment-house or slow-speed elevators to stop. This arrangement could not be used with a high-speed elevator. Means must be employed in a high-speed elevator to automatically slow down the car before the power is shut off from the motor and the brake applied or the car will not stop level with the floor. Both plaintiff's and defendants' elevators employ means for automatically slowing down a car before the power is shut off from the motor and the brake is applied. Neither elevator uses the floor selector circuits to bring the car to a stop level with the floor. They employ entirely different means and accomplish the slowing down and leveling of the car in an entirely different way. A leveling drum is employed in the defendants' elevators, and the floor selector has nothing to do with causing the car to stop level with a floor-landing.

PARKER PATENT HAS NO UTILITY.

The assertion that Parker is responsible for the modern automatic-stopping high-speed passenger elevator is an attempt to grossly mislead this Court. The record demonstrates that the patent in suit has contributed nothing of value in the industry. The mechanism described in the patent would be of no utility, if it were operative. It is not operative. No one has ever constructed or operated an elevator built in accordance with the specification or drawings of the patent, nor could he.

The special master found the patent specification defective, but was prone to condone the defects because Parker was not skilled in the elevator art.—

"That Parker knew little of electric elevator practice is evident from the many defects to be found in his specifications." [Master's Report, - R. 558.]

In giving Parker credit for having made a valuable invention, notwithstanding the fact that he had admittedly not conceived or described a practical or workable mechanism, the master was laboring under a misapprehension of law which characterized his entire report, both on the issue of validity and of infringement. This error, as stated by Judge James, had fundamental relation to the findings recommended by the master and caused Judge James to hold in his opinion:—

"I am totally unable to agree with the master;". [R. 638.]

The master failed to understand that in law a patent cannot be good merely for an idea that it would be desirable to automatically stop elevators in response to push-buttons. The patent could be sustained only for the means devised by Parker for attaining that result, leaving it open to any other inventor to accomplish the same result by other means.

In the celebrated *Selden Patent Case*, under circumstances similar to those in the case here, the Circuit Court of Appeals for the Second Circuit says:-

"A patent is granted for solving a problem, not for stating one."

(Columbia Motor Car Co. v. C. A. Duerr & Co., 184 Fed. 893 at 908.)

In Corning, et al. v. Burden, 15 How. 251, 14 L. ed. 683, 690, Mr. Justice Grier stated the familiar rule as follows:—

"It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted, and not for the result or effect itself."

The record conclusively demonstrates that for many reasons the mechanism described in the patent in suit is of no value. We shall here briefly refer to the more important reasons. These are more fully explained in the record.

High-Speed Elevators.

Until the speed of passenger elevators reached a point at which the operator in the car did not have time to properly distinguish an individual floor and manually stop the car, there was no value in automatically stopping the cars from push-buttons. The art, for obvious reasons, preferred to leave the stopping of the car to the operator. The higher car speeds required to meet the increased demands for elevator service in modern sky-

scrapers has but recently led to the need for automatic stopping. [Plaintiff's witness Charles,— R. 52.] It was common practice to automatically stop slow-speed cars from push-buttons in elevators of the apartment-house type. No operator was wanted in this type of elevator, because little traffic was handled. It is admitted that there is no value in the Parker patent if the mechanism therein described is not adapted for use in high-speed elevators.—

"Unless the system can be used with high speed elevators to bring them to a stop effectively level with the floor, it is of little utility."

[Master's Report,- R. 559.]

Judge James found that the mechanism disclosed in the patent in suit is not

"adaptable to the operation of fast moving elevators such as are necessary to be used in buildings containing many stories like the modern skyscraper." [R. 640.]

This finding is fully supported by the record.

Elevators must stop substantially level with the floor-landing. The load in an elevator car varies from trip to trip. The inertia of the car will vary with the speed and with the load. In a slow-moving elevator, the inertia is not of sufficient importance but what the car can be brought to a stop approximately level with the floor landing by simply opening the motor circuit and setting the brake at a predetermined distance in advance of a landing irrespective of the load. In high-speed elevators, the car would stop at varying distances from the landing, depending on the load and speed, if the power to the motor

were cut off and the brake applied at any set distance from the floor-landing. This has been taken care of in manually-controlled elevators by the operator manipulating the car-switch. No high-speed automatic-stopping elevator could be operated successfully unless some means be employed for automatically slowing down the elevator before the power is shut off and before the brake is applied. To apply the brake to an elevator car moving at high speed would be disastrous [R. 448-9]. Long prior to any alleged invention of Parker, the elevator art knew fully how to employ a floor selector to automatically shut off the power and apply the brake in an elevator. The only problem that had not been solved at the time of the alleged Parker invention was how to automatically slow down the car so that when the power was shut off and the brake applied the car would come to a stop level with the landing. This problem was admittedly not solved by Parker.

According to the specification of the patent, Parker thought that leveling could be accomplished by timing the contacts on the floor selector so as to open the running circuits and apply the brake at some predetermined distance in advance of the floor landing. The patent specifically states that this is how Parker expected to bring the car to a level with a floor landing.—

"Of course, it will be understood that the timing of the automatic secondary circuit closing means may be so arranged as to allow for the timely operation of the usual braking mechanism to overcome the momentum of the car so that the ultimate point at which the car comes to rest will be in proper alinement with the floor level." (patent, p. 5, lines 22-30.)

This method could not be employed in a high-speed car. The secondary controlling circuits described by Parker would always be completed by the floor selector when the car was the same distance from the floor. The patent describes no way in which these secondary controlling circuits can be completed at different distances from the floor dependent on the load or speed of the car. If the secondary circuits are completed at the same predetermined distance from the floor irrespective of the speed or load, the car will obviously stop at different distances from the floor level, for the same reason that a train or automobile will stop in different distances depending on its weight and speed.

It is necessary in a high-speed elevator to automatically slow the elevator down before the car can be automatically stopped level with a landing. No means for doing this is described in the patent. No such means existed in the art at the time Parker made his invention. The contention in Plaintiff's Brief that the prior art had such slow-down mechanism is shown by the record to be utterly fallacious and is directly contrary to the stipulation of fact made by plaintiff at the trial of this cause. Judge James correctly found that at the time of the alleged Parker invention:—

"No braking means were then in use which were adaptable to fast moving elevator cars and by means of which the car could be accurately leveled with a floor." [R. 640.]

Plaintiff was in the business of manufacturing car-switch elevators for many years prior to the alleged Parker invention. If the so-called Parker "Control" could be

used to "harness" any of such elevators, as represented by plaintiff, it would only have been necessary for plaintiff to have substituted Parker's new form of master control switch with the holding and neutralizing magnets, connecting the neutralizing magnet with the floor selector always employed in these car-switch elevators. Plaintiff does not contend that it has done this. It could not be done. It would be impossible to employ in a high-speed car the mechanism and mode of operation described in the Parker patent, even though automatic means for slowing down the car were available. Such slow-down mechanism must function before the running circuit is broken and the brake applied. A secondary controlling circuit from the floor selector must connect to such slow-down mechanism and not to the car-switch or the running circuit. The ultimate stopping of the car and the setting of the brake must be accomplished by some means in the system that will function after the car has, moved through the slow-down range. In practice this is more than the distance that separates two floors of a building. The secondary slow-down circuit from the floor selector has been broken and no longer exists at the point at which the running circuits are interrupted and the brake set. The means embodied in plaintiff's Signal Control elevators for automatically slowing down and stopping the car are in no way similar to those described in the patent in suit. The motor circuits are not opened and the brake is not applied by a secondary controlling circuit from the floor selector. On the contrary, such Signal Control elevators employ a slow-down mechanism designed by plaintiff subsequent to the alleged Parker invention. At the trial of this

cause, plaintiff stipulated that such slow-down and self-leveling mechanism required an invention not disclosed in the patent in suit.—

"It was admitted at the hearing before the master, by plaintiff's counsel that further invention was required beyond that of Parker to make his system adaptable at all for fast moving elevators."

[Judge James,- R. 640.]

The record shows that plaintiff was correct in stipulating to this fact. Plaintiff has obtained patents covering this slow-down and leveling mechanism and these patents are subsequent to the patent to Parker. One of these is Patent No. 1,632,225, granted to plaintiff on an application filed May 23, 1922, containing the following claim:

"8. An elevator system comprising, means for automatically initiating a reduction of the elevator speed to a definite low speed at different fixed distances from the desired landing, and means for causing the definite low speed of the elevator to be directly in some proportion to the unbalanced weight being lifted." [Def'ts Exhibit "D"–R., Vol. 3, p. 85.]

Another is Patent No. 1,632,226, granted to plaintiff on an application filed May 23, 1922, disclosing means for varying the distance that the car is slowed down when it is coming to a stop at a landing dependent upon the speed of the car, and claiming:—

"3. An elevator system comprising means for bringing the elevator from rest to full speed, and means rendered operative by the operator for automatically initiating a reduction of the elevator speed at different fixed distances from a desired landing."

[Def'ts Exhibit "C"- R., Vol. 3, p. 65.]

When plaintiff designed its Signal Control elevators, it did not adopt the means or mode of operation described in the patent in suit, but proceeded in the following manner:

- 1.— It devised automatic slow-down and stopping devices for automatically decelerating the speed of the car in steps as the car progressively passed fixed distances from the floor level.
- 2.— It devised means for automatically varying the point at which the operation of slowing down and stopping the car was initiated in accordance with the speed of the elevator car.
- 3.- It devised means which compensated for the different loads in the car and modified the slowdown operation in accordance with the load or number of people in the elevator car.

To limit the evidence in the record concerning these developments, plaintiff stipulated, at the suggestion of the master, that this mechanism in plaintiff's Signal Control elevators required invention over the Parker patent.—

"Mr. Lane stated that he would admit for the purposes of this case that the slow-down and braking mechanism in the Otis elevator are invention apart from the Parker patent." [R. 257.]

Plaintiff is unable to show any automatic slow-down mechanism in the prior art that could be employed with the mechanism described in the patent in suit in a high-speed elevator. The leveling devices used in manually-controlled passenger elevators could not be used. These leveling devices merely bring the car to a level with the landing, where the operator has manually slowed down

the car and brought it to a stop a few inches above or below the landing. They are not a substitute for automatic slow-down mechanism required to automatically bring a high-speed car to a stop substantially level with the floor. Such leveling mechanism can function only by the car attendant manually regulating the slow-down of the car in accordance with the load and speed. In other words, the operator must manually slow down the car to bring it within the so-called micro range where leveling mechanism of that type could function.—

"On a self-leveling elevator, if it was set for a signal to be registered to the operator a floor in advance, it would give the operator 90 per cent of the difference of travel between the time he got that signal for him to begin to watch his floor and catch his car within the micro range."

[R. 125.]

The brief for plaintiff goes outside the record here and asserts that the patent involved in *Otis v. Kaestner & Hecht*, 234 Fed. 926, discloses a mechanism for automatically slowing down elevators prior to the alleged invention of Parker. The patent involved in that suit is not in evidence here. It is apparent from the decision of the court in that case that the patent there had nothing whatever to do with the problem of automatically slowing down a high-speed elevator car at different landings. The patent there related solely to a safety appliance used on elevator cars to avoid the cars hitting the bottom or the top of the elevator shaft. It is not a device for automatically slowing down a high-speed car to bring it to a stop at a floor landing, but instead a device for prematurely converting the elevator car from a high-

speed car to a low-speed car solely at the terminals of the elevator shaft. This conversion to a low-speed car takes place at a predetermined distance from the terminal of the elevator shaft and the mechanism could not be employed for stopping at intermediate landings. Moreover, the car is not automatically stopped after the conversion to a slow-speed car, but is stopped manually by the operator.—

"As the car nears the end of its run up or down the winding drum is made to close a switch. This at once cuts out the rheostat, permits full current to flow through the shunt field, giving increased armature resistance, and slowing the speed, but still leaving the car driver in full control at the slower rate."

(Otis v. Kaestner & Hecht, 234 Fed. 926, at 931.)

The mechanism involved in that case would obviously not serve to automatically slow down a high-speed car preparatory to stopping automatically level with various floor landings. It embodied no means for varying the point at which slow-down commenced or the rate at which slow-down took place to compensate for varying loads or speeds. The terminal slow-down mechanism involved in *Otis v. Kaestner & Hecht* has no relation to the automatic slow-down mechanism embodied in plaintiff's Signal Control elevators. The attempt in plaintiff's brief to go outside the record in this case, contrary to the stipulation made herein, is totally unjustified. The finding of the court that the mechanism described in the patent in suit cannot be used in high-speed elevators is supported by the uncontradicted evidence in the record in this case.

Bank of Elevators.

The mechanism disclosed in the patent in suit is further lacking in practical utility because it could not be used in a bank of elevators. A plurality of highspeed passenger elevators are invariably found in the same building. These elevators are scheduled in order to handle the traffic, and the set of elevators is called a "bank". With the means disclosed in the Parker patent, the pushing of a button at a hall landing could only cause the stopping of a particular car in the bank. This is because the circuits from the hall push-buttons as described in the Parker patent pass through the car-button circuits to the floor selector. The passenger at the hall landing would have to wait until the particular car arrived and the other cars in the bank would pass by without stopping. Such a system is not wanted in the elevator industry and is totally lacking in any utility. When a passenger presses a button at a hall landing, he wants the first car approaching the landing to stop. Plaintiff's witnesses admit that plaintiff has never installed a single Signal Control elevator. [R. 72, 200.] There is no use for high-speed automatic-stopping elevators except to serve a volume of traffic that requires a bank of elevators. Plaintiff's elevator expert Crabbe admits that to be practical the mechanism must be able to stop the first car in a bank of elevators to come to a landing, and not a particular car.-

"It is necessary to the practical success of a bank of signal-control elevators that there be some means to stop the first car that comes to a landing when a button has been pushed, rather than to have a plurality of buttons, each button stopping only one car." [R. 199.]

He further admits that the first car approaching a floor could not be stopped by the mechanism illustrated in the Parker patent, or by any mechanism in which the circuits from the hall push-buttons pass through the car push-button contacts.—

"The master asked whether a bank of elevators with more than one elevator, whether the first car approaching the floor could be stopped by pushing a button that closes the circuit that runs through the contact in the car buttons. The witness answered: No, I do not think it could." [R. 217.]

In plaintiff's Signal Control system, the first car approaching a landing will automatically stop in response to a push-button. This is because the plaintiff's Signal Control system does not embody the mechanism and mode of operation described in the patent in suit. Plaintiff has stipulated that the means embodied in its Signal Control system by which the first car in a bank may be automatically stopped from a push-button is the result of an invention not described in the Parker patent.—

"As to whether there are other inventions involved in the complete installation, Mr. Lane said: I certainly concede that there is an invention beyond the Parker patent when you adapt it for use with a plurality of elevators." [R. 199.]

In his opinion, Judge James states:

"Admittedly, there is nothing in Parker's disclosure which can make his installation work where more than one elevator is being operated." [R. 643.]

It is conclusively established that the mechanism described in the patent in suit is totally lacking in any

practical utility because it could not be used in high-speed elevators and could not be used in a bank of elevators. It is a well-settled principle of patent law that a patent will not be sustained for a machine which will accomplish no practical purpose when put to industrial use. Such a machine is not useful within the sense of the patent law. This rule is illustrated by the decision of the Circuit Court of Appeals for the Eighth Circuit in *Besser v. Merrilat Culvert Core Co.*, 243 Fed. 611, in which the Court said:

"The term 'useful', as contained in the patent law, when applied to a machine, means that the machine will accomplish the purpose practically when applied in industry. It is to be given a practical and not a speculative meaning. It means that the machine will work and accomplish the purposes set forth in the specifications. Even if the machine can be made to accomplish the purposes specified, it is not useful, within the meaning of the patent law, if from its inherent nature it will accomplish the purpose only to such a restricted extent as to make its use in industry prohibitive. This has been the interpretation put upon the term in the patent law from the earliest decisions to the present time. Bliss v. Brooklyn, Fed. Case No. 1,546; Chandler v. Ladd, Fed. Cas. No. 2,593; Troy Laundry Mach. Co., Limited, v. Columbia Manufacturing Co. (D. C.), 217 Fed. 787. These views are fatal to plaintiff's machine. It would work as a core if it was started at the smaller size and expanded through the range of its expansibility. After that had been done, however, it would not work when contracted for smaller sizes. The expense of the machine made it worthless in the industry if its use was thus restricted. To be sure, it is well established in patent law that a machine need not be perfect in order to be patentable. If it will accomplish the purposes set forth in the specification practically in industry the patent is valid, although the machine may be greatly improved by the addition of some new element. If, however, it will not work practically in industry when constructed according to the claims and specifications, it is not useful, and cannot be sustained upon a showing that it can be made to work by a small improvement. That is the objection to the suggestion of plaintiff here that if a wire be applied to his machine it can be made to work some. See Bliss v. Brooklyn, Fed. Cas. No. 1546. Plaintiff had a new idea. It was valuable in industry. Unfortunately for him, however, an idea is not patentable. Only a machine is patentable, and when plaintiff undertook to embody his idea in a machine he did not give it an expression which would work in industry. His machine, therefore, was not patentable."

The master mistakenly concluded that it was immaterial that subsequent inventions were required to enable a bank of high-speed elevators to be automatically stopped from push buttons. [R. 583.] The authorities uniformly hold that the patent in suit cannot be sustained or aided by the subsequent inventions of others.—

"To remedy the defects of his system and apparatus something more was required than mere mechanical engineering skill; nor did the later inventions inure to his benefit. Computing Scale Co. v. Standard Computing Scale Co., 195 Fed. 508, 115 C. C. A. 418. The Kennedy device was not entirely useless, in the sense that it would not work at all;

but its principle of operation was clearly divorced from that of defendant's standard and double relay systems and apparatuses.

"As in my opinion the patentee had in mind a method for measuring the time during which current passed to the battery, as distinguished from the amount of current, and an apparatus requiring a predetermined voltage, I have reached the conclusion that the claims in issue must be limited to such a method and device, regardless of their broad phraseology."

(Consolidated Ry. E. L. & E. Co. v. U. S. L. & H. Corp., 246 Fed. 127, at 132-3.)

"While the Morris patent describes a machine of the same type, it did not solve the problem of automatically inserting by machinery a diagonal strip in open cane work. No practical machine embodying the invention has ever been constructed. cessful solution of the problem was subsequently attained by the inventor and his son in a patented machine constructed on a different principle. If the Morris machine had proved to be practical and useful, it is doubtful whether the defendants' machine could be held to be an infringement upon any recognized rule of equivalents, in view of the radical difference between the two structures. But, the Morris machine having proved a practical failure, it is manifest that the defendants' machine cannot be held to infringe. The decree of the circuit court is affirmed, with costs."

(Ford, et al. v. Bancroft, et al., 98 Fed. 309, at 312-13 - C. C. A. 1st Cir.)

In the Selden Patent Case the Court of Appeals for the Second Circuit specifically held that a patent may not be sustained which requires the subsequent invention of another to adapt the invention to practical use, saying of such a patent:—

"Its description must explain the invention itself, the manner of making it, and the mode of putting it in practice. In the absence of knowledge upon these points, the invention is not available to the public without further experiments and further exercise of inventive skill. A claim for a combination which embraces an element only in case it is made capable of being employed in the combination and without disclosing means of adapting it discloses nothing definite. The questions remain: What engine is capable of being combined in a road vehicle? What changes are necessary to adapt it to the purpose? How are these changes to be made? If we were to construe the claim as the complainants urge, we should be obliged to go further and hold it uncertain, indefinite and consequently invalid."

(Columbia Motor Car Co. v. C. A. Duerr & Co., 184 Fed. 893, at 908.)

Substitute automatic slow-down mechanism and means to adapt the system to a bank of elevators for the engine referred to in the Selden case, and the language of that case fits precisely plaintiff's position in this case.

NON-USE OF THE PARKER PATENT.

The testimony of Parker establishes without contradiction that the patent in suit is purely a paper speculation. The inventor says that in July, 1920, in a hotel in Detroit he conceived that it would be desirable to have the elevator cars stop automatically in response to push-buttons. He believed this would be a better way to handle an elevator than to have the operator in the car signaled to stop the car from the push-buttons. It is elementary that this idea could not itself be patented and that Parker could obtain a patent only for such machine as he might invent which would accomplish this result. Patents are not granted for results, functions, or modes of operation. No one can have a patent for the function or abstract effect of a machine, but only for the machine which produces it.

Morley Sewing Machine Co. v. Lancaster, 129 U. S. 263, 32 L. Ed. 715;

The Corn-Planter Patent, 23 Wall. 181, 23 L. Ed. 161;

Corning v. Burden, 15 How. 251, 14 L. Ed. 683;

Risdon, etc. Locomotive Works v. Medart, 158 U. S. 68, 39 L. Ed. 899;

Electric R. Signal Co. v. Hall R. Signal Co., 114 U. S. 87, 29 L. Ed. 96;

O'Reilly v. Morse, 15 How. 62, 120, 14 L. Ed. 601; LeRoy v. Tatham, 14 How. 156, 174, 14 L. Ed. 367;

Burr v. Duryee, 1 Wall. 531, 581, 17 L. Ed. 650;

Fuller v. Yentzer, 94 U. S. 288, 24 L. Ed. 103;

Wicke v. Ostrum, 103 U. S. 461, 26 L. Ed. 409;

Westinghouse v. Boyden Power Brake Co., 170 U. S. 537, 556, 42 L. Ed. 1136;

Rubber-Tip Pencil Co. v. Howard, 20 Wall. 498. 22 L. Ed. 410;

Miller v. Eagle Mfg. Co., 151 U. S. 186, 201, 38 L. Ed. 121.

Parker went to a patent attorney and they laid out the drawings and description of the patent in suit [R. 75]. No elevator was constructed in accordance with these drawings and specifications and no attempt was made to test their operativeness or practicability.—

"At the time the application was filed in the Patent Office April 25, 1921, I had not built a structure and had made no test of the arrangement that was shown in the diagram." [R. 95.]

No elevator built in accordance with the drawings and specifications of the patent in suit has ever been built or operated. Parker admitted at the trial of this case that he could not state whether an elevator built in accordance with his patent drawings and specifications would be operative [R. 95]. Plaintiff's elevator expert Crabbe testifies:—

"I never saw an elevator erected in accordance with the schematic drawing of Parker." [R. 229.]

It is well settled that a paper patent will not be given a broad construction or a wide range of equivalents. The inference from non-use is the converse of the inference drawn from widespread commercial success. A paper patent is not infringed except by a machine that is constructed substantially precisely in accord with the drawings and specifications of the patent. That this is the law in this Circuit is established by a number of decisions of this Court. The case of *Henry v. City of Los Angeles*,

255 Fed. 769, at 780, is directly in point. The patent before this Court in that case was for an electro-mechanical water-wheel governor. The patent described certain circuits and control mechanism for operating a waterwheel. The claims in terms covered any means that would perform certain functions. In this respect they were identical with the reissue claims in issue here. No one had ever constructed a water-wheel governor in accordance with the specifications and drawings described in the patent there in suit. The defendant employed a water-wheel governor which would perform the same functions, but by different means. The plaintiff contended that the patent should be broadly construed because the patentee was the first who had ever invented any governor that would perform those functions. This Court held that since no one had ever constructed and placed in use a governor built in accordance with the drawings and specifications of the patent, the patent must be limited in construction to the particular means there shown and described, and was not infringed by the defendant. have quoted from this decision earlier in this brief.

In the case of Cocks v. Rip Van Winkle Wall Bed Co., 28 Fed. (2d) 921, this Court again has stated:-

"Another reason why the appellant's combination should not receive the construction due to a pioneer invention, but, on the other hand, should be strictly construed, is the fact that although the invention had been patented nearly ten years before the present suit was begun, it had not been utilized or placed upon the market but was still a paper patent. While the validity of a patent is not affected by its nonuser, Continental Paper Bag Co. v. Eastern Paper Bag Co., 210 U. S. 405, 28 S. Ct. 748, 52 L. Ed. 1122, the

nonuser has a bearing on its construction, and the courts are not disposed to give the same any broader scope than it is clearly required to be given, Westinghouse Elec. & Mfg. Co. v. Toledo, P. C. & L. Ry. Co. (C. C. A.), 172 F. 371; Wesel Mfg. Co. v. Printing Mach. Co. (D. C.), 218 F. 178; Kestner Evaporator Co. v. American Evaporator Co. (C. C.), 182 F. 844."

The Circuit Courts of Appeal in other Circuits have uniformly adopted and applied this same rule.

Lowell v. Seybold Mach. Co., 169 Fed. 288 (C. C. A. 2nd Cir.);

National Malleable Castings Co. v. Buckeye Malleable Iron & Coupler Co. et al., 171 Fed. 847 (C. C. A. 6th Cir.);

Ford v. Bancroft, 98 Fed. 309 (C. C. A. 1st Cir.).

It is not the intention of the patent law to permit a patent to be used for speculation. This suit is purely speculative. The alleged Parker invention is a mere hypothesis. The application for the patent was filed by Parker without any knowledge that the means described by him could be used successfully. No one now claims that it could. No business was built up under this patent. Nothing that Parker did contributed in any way to the development of plaintiff's Signal Control elevators. Plaintiff subsequently observed the defendants' elevators and purchased the patent for a nominal sum for the purpose of this suit. The defendants' elevators are not charged with employing any of the means described in the patent drawings or specifications. Plaintiff's claim that the patent has been infringed depends entirely on ignoring

the means disclosed in the patent and inducing the Court to construe the patent as giving a monopoly on the idea of automatically stopping elevators from push-buttons. Such attempts as this have been made before, but without success.—

"In this case we have an attempt to convert an improved machine into an abstraction, a principle or mode of operation, or a still more vague and indefinite entity often resorted to in argument, an 'idea'."

(Burr v. Duryee, 1 Wall. 531, 17 L. ed. 650, at 660.)

The design of the patent law is to reward those who have created some new and useful machine. The law does not intend that a monopoly can be secured by those whose machines are valueless. Such a policy would retard rather than promote the progress of the useful arts. It would create a class of speculators who by patents on desirable results could exclude all others from successfully accomplishing those results, even though they themselves had never done so. The Supreme Court has condemned the use of the patent system for such speculation, saying:—

"It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the arts."

(Atlantic Works v. Brady, 107 U. S. 192, 27 L. Ed. 438, at 441.)

PARKER PATENT INOPERATIVE.

The mechanism as described and illustrated in the Parker patent in suit is not operative. We have already shown that the control described by Parker has no utility because it could not be adapted to a high-speed elevator and could not be used in a bank of elevators. We shall now show that it is inoperative for any purpose. The principal points of inoperativeness are illustrated in Figures 5, 6, and 7 appended to this brief. These are explained in detail in the record and we make only a brief summary here.

The Tail Piece Circuits (Figure 5 of this Brief) .-

The patent in suit describes that the car-switch handle is provided with a tail piece 42 which is intended to contact with contacts 39 and 40 when the car-switch is moved to the "up" position and to contact with contacts 39' and 40' when the car-switch is moved to the "down" position. The patent explains that this arrangement is necessary to guard against the operator short-circuiting the system by moving the car-switch into engagement with the "up" contacts when the car is traveling down, and vice versa (patent, p. 5, lines 83-118). A study of the circuits described in the Parker patent shows that because of the tail piece 42 the car-switch could not be returned to the neutral position without stopping the car. Defendants' exhibit "V" is an enlargement of the Parker patent, showing in colored lines the circuit which will be set up in the operation of returning the car-switch lever to neutral position. This circuit is reproduced as Figure 5 of this brief.

Referring to the Figure, the car-switch lever is shown in the position it occupies when being returned to the neutral position after it has been moved to the "up" position, leaving its contact arm 9 closing the "up" contacts of the car-switch. A circuit is established through the tail piece as follows: From the positive main 12 to the line 43, through contacts 40, 39, now bridged by the tail piece 42 of the car-switch, through the line 36', ring g', thence through the selector arm 34, which at all times connects with the rings g and g', through the line 36 to the neutralizing magnet 37, through the line 38 to the When this circuit is established, the negative main. neutralizing magnet 37 is energized, releasing the contact arm 9 of the car-switch so that the spring will cause it to fly back. This would break the primary running circuit illustrated in Figure 1 of this brief, deenergize the pole changing magnet 16, and break the motor circuit shown in Figure 2 of this brief. This would bring the elevator to a stop before the secondary controlling circuit had been completed through the floor selector, and render the system totally inoperative. Parker admitted in his testimony that this is true if the ring g and the ring g' on the floor selector are bridged by the brush 34 as shown in the patent [R. 102].

Up Car Stopped By Down Buttons (Figure 6 of this Brief).-

The patent describes one set of push-buttons for the floor landings which are intended to stop the car when traveling up, and another set of push-buttons for the floor landings intended to stop the car when traveling down. An "up" button should not stop a "down" car, and *vice versa*,

but with the mechanism as described in the patent in suit, it will do so. Defendants' exhibit "W" is an enlargement of a drawing of the Parker patent illustrating in color the circuit set up by the "down" buttons, which would stop an "up" car. This circuit is reproduced in Figure 6 of this brief.

Referring to the Figure, the circuit may be traced as follows: From the positive main through the line n², through the reset magnet m²′, post k²′ and contact j²′ and l²′ of the hall-button, through the line o²′, contacts p²′ and l²′ and post c²′ of the car-button, line h²′ to contact f²′ of the floor selector, through the arm 34 to ring g of the floor selector, thence by line 36 to the neutralizing magnet 37 and line 38 to the negative main. This circuit would cause an "up" car to stop in response to a "down" button, and *vice versa* [R. 453].

Resetting Of Buttons (Figure 7 of this Brief) .-

Defendants' exhibit "Y" illustrates that the mechanism described in the Parker patent would cause a hall-button to be reset if a car went by that floor in either direction, even though the car did not stop at the floor. This would mean that when the car did arrive at the floor from the proper direction, the button would have been released and the car would not stop. This circuit is reproduced as Figure 7 of this brief.

In the figure the circuit may be traced as follows: From the positive main through the line n^2 , through the reset coil $m^{2\prime}$, post $k^{2\prime}$, and contacts $j^{2\prime}$ and $l^{2\prime}$ of the hall-button, through line $o^{2\prime}$, contacts $p^{2\prime}$, $l^{2\prime}$, and post $c^{2\prime}$ of the carbutton, through line $h^{2\prime}$ to contact $f^{2\prime}$, arm 34 and ring g^{\prime} .

through line 36', through the coil of magnet 37' and line 38' to the negative main. This circuit is completed whenever the car passes the floor at which a push-button is set. An "up" car will reset a "down" push-button, and vice versa. The circuit was intended by Parker to reset an up button after an up car had stopped, or a down button after a down car had stopped. Parker overlooked the fact that this circuit would function irrespective of the direction of travel of the car. Exhibit "Y" shows the circuits that are set up in the Parker system, whereby a hall push-button would be reset when the car travels past the floor in a direction opposite to that indicated by the push-button [R. 453].

Race of Circuits .-

The term "race of circuits" in the elevator art refers to a circuit which, when it is complete, is intended to energize two different magnets, each of which has a contact which will open the circuit. When this condition exists in an elevator installation, if either contact operates a fraction of a second before the other operates, the circuit is broken and the other contact cannot operate. It is a race to see which of the two contacts will operate. Only one can operate and the other will not. The secondary control circuits described in the patent in suit are admitted to be open to this objection. This can be seen by reference to Figures 3 and 4 of this brief. For example, in Figure 3 the secondary control circuit includes the car-switch contacts 10 and 11 and the push-button contacts d² and b². If either of these switches opens before the other, the circuit is dead. Yet the circuit must be maintained until both the reset magnet e^2 is energized to open its contacts and the neutralizing magnet 37 has been energized to release the car-switch contact arm 9. In practical operation, one of these two devices would always operate before the other, and then the other could not operate. For example, in Figure 4, if the reset coil m^2 is energized to open the hall contacts l^2 and j^2 before the neutralizing coil 37 has released the car-switch arm 9, the intended operation could not take place.

Plaintiff's elevator expert Crabbe admits that the mechanism described in the patent in suit is open to these objections and that it is difficult for him to say what would happen from any operation of such a circuit.—

"I find in the Parker drawing that the reset coils of the hall buttons are in series with the de-energizing coils on the car switch, that is, they are in series when the selector contacts make for a given floor. There might possibly be some time relation necessary under these circumstances for them to operate.

"If the deenergizing coil 37 functioned to neutralize the coil 32 so that the arm 9 passed off the contacts 10 and 11 before the reset coil of the hall button functioned, it may not reset the button.

"If the reset coil functioned before the arm 9 disconnected, the contacts 10 and 11, it is hard to say what would happen." [R. 225.]

Curing Inoperativeness.

The law is well settled that a patent for an inoperative machine is void unless the inoperativeness could be cured by the exercise of mere mechanical skill.—

"A patented machine that will not do what it is intended to do could not sustain an action against one who was shown to use a successful and operative machine." (Coupe v. Royer, 155 U. S. 563, 39 L. ed. 263, at 267.)

In the circuits illustrated in Figures 5 and 6 of this brief, the selector arm 34 contacts with the rings g and g'. This is exactly in accordance with the drawing of the patent. The master in his report conceded:

"If such is the case the intended operation of the structure is thwarted." [R. 559.]

Plaintiff contended at the trial that one skilled in the art would not use such a floor selector, but would use a floor selector in which there was more than one arm 34, or some other means of separating the selector circuits. The master stated in his report that "the art was sufficiently advanced in skill and knowledge to supply the deficiency." [R. 559.] Judge James did not think the question need be decided because he assumed that the car-switch might be used without the tail piece. [R. 637.] This would not be practical because of the danger of the operator shortcircuiting the car. The patent concedes the necessity for the tail piece. Eliminating the tail piece would not avoid the inoperativeness illustrated in Figure 6 of this brief. The provision of another arm 34' or some other means of separating the selector circuits would not avoid the inoperativeness illustrated in Figure 7 of this brief.

Plaintiff's witnesses concede that the mechanism described in the Parker patent is inoperative as shown, but testify that in their opinion this inoperativeness could be cured by the exercise of mechanical skill. How they thought this could be done was developed on cross-examination. We shall not attempt to repeat this testimony here. When they got through, the mechanism described

in the patent no longer existed. If skilled elevator engineers could accomplish what plaintiff's witnesses say they could to cure the inoperativeness of the Parker patent, then no invention by Parker was required to enable them to construct an elevator that would do everything claimed for the patent in suit. Plaintiff's witnesses testified:—

- 1st that the floor selector described in the patent in suit will not work as shown, but that operative floor selectors were known in the prior art;
- 2nd that the master control switch of the Parker patent is a step backward in the art, but that an operative car-switch existed in the prior art;
- 3rd that the Parker patent describes no braking mechanism, but that the necessary braking mechanism was known to the elevator engineer in the prior art; and
- 4th that the secondary control circuits described in the patent could not be used, but that satisfactory secondary control circuits were known in the prior art that could be used.

Plaintiff cannot assert one standard for the skill of the elevator engineer for the purpose of correcting the inoperativeness of the patent in suit, and a different standard in determining what, if anything, Parker invented that could not have been provided from the prior art by the skilled elevator engineer. Plaintiff proposes to substitute something from the prior art for everything that Parker described. If this could not be done, the patent in suit is inoperative. If it could be done, the patent is within the skill of the calling and void for lack of invention.

OTIS SIGNAL CONTROL ELEVATORS.

Plaintiff has introduced evidence showing commercial installations of its so-called Signal Control Elevators, and asserts that the patent in suit is to be liberally construed in view of the success of these installations. It is our contention that the opposite is true. Plaintiff's Signal Control Elevators were not invented by Parker. They are not constructed in accordance with the drawings and specifications of the patent in suit. Plaintiff concedes that they embody a large number of inventions not made by Parker. Plaintiff admits that these inventions are necessary to the commercial success of its Signal Control Elevators. The fact that the plaintiff could not use the elevator control described in the Parker patent, but was required to invent a different control, establishes the impractical, paper status of the Parker patent.

"Parker never constructed or had constructed an installation demonstrating his system; neither does it appear that the plaintiff here, who purchased his patent, has ever used it in the form taught and specified in the patent. The plaintiff, subsequent to the date of the Parker patent, secured patents issued to it covering control systems for fast-moving elevators. I do not understand that it is claimed that plaintiff made use of the Parker disclosure as specified at all, but that it adopted 'equivalents' of the essential parts."

[Judge James,- R. 641.]

There is no support in the record for plaintiff's contention that the means comprising its Signal Control elevators are the "equivalents" of the means described in the patent in suit. There is no similarity whatsoever except in result. Identity of function or result does not establish equivalency. This is elementary.—

"It is true that the patentee, after describing his machine, has set forth his claim in rather ambiguous and equivocal terms, which might be construed to mean either a process or machine. In such case the construction should be that which is most favorable to the patentee, 'ut res magis valeat quam pereat.' His patent having a title which claims a machine, and his specification describing a machine, to construe his claim as for the function, effect, or result of his machine, would certainly endanger, if not destroy, its validity. His claim cannot change or nullify his previous specification with safety to his patent. He cannot describe a machine which will perform a certain function, and then claim the function itself, and all other machines that may be invented to perform the same function."

(Corning et al. v. Burden, 15 How. 251, 269, 14 L. Ed. 683, at 691.)

In Union Special Machine Co. v. Metropolitan Sewing Machine Co., et al., 201 Fed. 690, Judge Mayer held that the means employed in the defendant's machine were not the mechanical equivalents of the means described in the patent in suit where the individual elements which made up the groups of mchanical devices were not identical, nor part for part the mechanical equivalents of each other, even though the respective groups in the two machines conjointly operated to produce the same result. Plaintiff has offered no evidence of any similarity between its Signal Control elevators and the mechanism described in the patent in suit except that the functions are the same. When asked to make a comparison, plaintiff's elevator expert testified:—

"The witness was asked how the structure shown in the Parker patent compares with the construction and operation of the Otis Elevator Company's signal control elevators. Objected to as not the best evidence. Objection overruled. Exception.

"The witness answered: They are the same." [R. 147.]

On cross-examination he was asked what he meant by his testimony that these mechanisms were the same, and testified that he meant they performed the same function.—

- "Q. What do you mean when you say a thing is just the same? A. I mean it performs the same function.
- "Q. You don't mean it does it in the same way or that it is constructed the same? A. No."

[R. 212.]

Throughout the trial defendants objected to the testimony of plaintiff's experts that plaintiff's Signal Control elevators embody the Parker invention because they perform the functions described in the patent in suit. Defendants demanded that plaintiff prove the construction and mode of operation of its Signal Control elevators and establish that the mechanism therein is similar to and the equivalent of that described in the patent in suit. Plaintiff did not comply with this demand. A single drawing was finally produced by plaintiff [R. 267]. No witness identified or explained this drawing. The drawing is not intelligible in the absence of testimony. The only comparison in the record between the mechanism embodied in plaintiff's Signal Control elevators and the mechanismi described in the patent in suit was obtained by defendants on cross-examination of plaintiff's witnesses, and establishes fully that there is no similarity whatever except in result. This cross-examination established the following differences in the mechanism:

- (1) The car-switch employed in plaintiff's Signal Control elevators is not moved in one direction to start the car upward and in the opposite direction to start the car downward. [R. 211.]
- (2) The car-switch employed in plaintiff's Signal Control elevators is not held in circuit closing position by any holding circuit or magnet, and is not released by the stopping circuits. [R. 213.]
- (3) Plaintiff's Signal Control elevators do not employ the type of floor selector described in the patent in suit. [R. 230-1.]
- (4) The floor selectors employed in plaintiff's Signal Control elevators do not have the hall buttons and car buttons connected in the same circuits. [R. 229-230.]
- (5) The closing of the contacts on the floor selectors employed in plaintiff's Signal Control elevators does not open the running circuits and shut off the power to the motor as described in the patent in suit. [R. 229-230.]
- (6) The pole-changing switch employed in plaintiff's Signal Control elevators is not opened upon the closing of the floor selector contacts as described in the patent in suit. The pole-changing switch remains open until the car arrives at a level with the floor landing. [R. 211.]
- (7) The circuits and wiring of the plaintiff's Signal Control elevators are entirely different from those shown in the patent in suit. [R. 229.]
- (8) The hall button circuits employed in plaintiff's Signal Control elevators do not pass through the car buttons. [R. 217.]

- (9) Plaintiff's Signal Control elevators do not employ separate "up" buttons and separate "down" buttons in the car, as disclosed in the Parker patent in suit, but instead only employ one button for each direction. [R. 217.]
- (10) Plaintiff's Signal Control elevators do not employ a control for the motor in which the pole-changing switch directly connects the motor to a source of power, but instead employs a complicated system of motor control known as "multi-voltage". [R. 208.]
- (11) Plaintiff's Signal Control elevators are arranged so that the floor buttons will stop the first of a bank of cars which pass a floor, no such construction being disclosed in the patent in suit. [R. 195.]

Had plaintiff described the mechanism employed in its Signal Control elevators, many other differences would appear.

Under these circumstances the patent in suit is not aided by the success of plaintiff's Signal Control elevators. The rule that widespread commercial success entitles a patent to a liberal interpretation is limited to cases in which the particular machine described and illustrated in the patent is the one that has had the commercial success. The patent is not aided by the success of a different machine.—

"We need only refer to the alleged pronounced commercial success of the Haggerty guard. That success, to be proof of anything, must be confined to the exact thing disclosed by the patent. Johnson, et al. v. Lambert, 234 Fed. 886, 148 C. C. A. 484; Duer v. Corbin Cabinet Lock Co., 149 U. S. 216,

13 S. Ct. 850, 37 L. Ed. 707. That padded football trousers are a pronounced success does not of necessity signify that the Haggerty guard is such."

(Haggerty, et al. v. Rawlings Mfg. Co., 14 Fed. (2d) 928, at 930 (C. C. A. 8th Cir.)

"Extensive use of the Clarke machine is urged in support of the patent. Even if his commercial machine fully embodied these claims, we cannot find from the evidence that to any material degree these two claims, out of the five of this patent, were alone responsible for the contended commercial success, especially as it appears on the plate of the Clarke machine in evidence that it embodies in its construction seven other patents referred to by their dates, as well as 'others pending'. Indeed, it is quite possible that the success is in large measure attributable to Clarke's departure from the somewhat complicated mechanism shown in his patent for adjusting the drum without movement of the frame whereon it (Barker v. Atwell, 13 Fed. (2d) 363, is mounted." at 364 - C. C. A. 7th Cir.)

"Plaintiff manufactured and sold only 125 trailer trucks conforming to the specific construction illustrated and described in its patent. The dates between which they were made and sold are not clearly shown, but it seems to have covered a period of several years. Plaintiff discovered, shortly after beginning to make them, that the specific construction of the patent was not as efficient or satisfactory as it could be made. It departed therefrom immediately, and

has since made and sold trucks having either a single or double drag link, with ball and socket connections as the compensating means. Plaintiff's large sales and the commercial success of its trailer, on which is based the usual arguments, are of these later types. Furthermore, these sales are due to the growth of industry and trade conditions, and in no wise to the specific contribution, if any, to the trailer truck art of Eccard & Smith's alleged invention. In other words, the validity of plaintiff's patent and the scope of its claims, are in no wise aided by such commercial success as it is shown plaintiff's truck has had."

(Troy Wagon Works Co. v. Ohio Trailer Co., 264 Fed. 347, at 351.)

"The same consideration affects the force to be given to commercial use. As so often happens, plaintiff says there is a strong inference of that utility which is a 'new result', because the device has gone into extensive use, and defendant says we should infer that there was no novel utility, because the device has not been commercially accepted. The fact is, a few axles in the form shown by this patent, and embodying, also, other Lindsay patents, were sold by the Lindsay Company; and then that company went out of business. Later, the Timken Company took a license under this and two other Lindsay patents, and under them, and in connection with designs and improvements of its own, made an axle which was widely sold and was bought and used by defendant for one year; but there is slight room to infer that

its commercial acceptance was due to the merits of this particular patent rather than of the other patents and improvements which it embodied, and still less to attribute its commercial success to the comparatively minor structural detail, viz., the peculiar sectional casing, without which it would not have responded at all to the two claims in suit. The commercial success of this Timken axle throws no light on the validity of this claim."

(Winton Motor Carriage Co. v. Lindsay Auto Parts Co., 239 Fed. 521, at 526-7 - C. C. A. 6th Cir.)

The success of plaintiff's Signal Control elevators is more apparent than real. Large figures do not mean much in this industry. Plaintiff admits that it has used the most extraordinary efforts to stimulate the sale of its Signal Control elevators [R. 58-59]. Plaintiff has enjoyed the bulk of the elevator business in this country for many years prior to the patent in suit. It would doubtless have made the same installations with any type of elevator that it offered to the trade. The sales of the Signal Control elevators by plaintiff have amounted to only approximately one-tenth of plaintiff's total sales of elevators in this country for the period in question [R. 68]. Under these circumstances the sales have no significance.—

"That the extent to which a patented device has gone into use is an unsafe criterion even of its actual utility, is evident from the fact that the general introduction of manufactured articles is as often effected by extensive and judicious advertising, activity in putting the goods upon the market, and large commissions to dealers, as by the intrinsic merit of the articles themselves."

(McClain v. Ortmayer, 141 U. S. 419, 35 L. ed. 800 at 803.)

"We are still of opinion that 'commercial success is an unsafe guide to invention, unless prior efforts to fill the space be shown, * * * and, when they are shown, it is not infrequently found that the faculty of invention was not necessary to fill whatever vacancy existed." Boston, etc. Co. v. Automatic Co. (C. C. A.), 276 F. 910."

(David Belais, Inc. v. Goldsmith Bros. Smelting & Ref'g Co., 10 Fed. (2d) 673.)

"The commercial opportunity is shown to have been afforded by the enormous growth of the electrical appliances for comfort above enumerated, and plaintiff is and has been a most pushful advertiser, setting forth in publications of record plausible reasons for patronage having no reference to whatever invention is defined by the claims in suit. We decline to consider commercial success in respect of either the fact of invention or interpretation of claims."

(Harvey Hubbell, Inc. v. General Electric Co., 267 Fed. 564, at 569.)

THE PRIOR ART

The prior art in evidence is of two classes: (1) the testimony and admission of the experts concerning the types of elevators which were in common commercial use prior to the Parker alleged invention, and (2) the patented art. At the date of the alleged Parker invention, many different types of elevators had been designed employing various mechanisms for automatically stopping an elevator. There was no room for any basic invention in stopping elevators by push-buttons in any particular manner. Judge James found that at the time of the Parker invention the art, if not a crowded one, was at least well occupied.—

"* * my conclusion, to the contrary, is that when Parker conceived his invention, the art of elevator control by electrical means, if not already crowded, was certainly well occupied." [R. 638.]

Elevators in common use at the time of the alleged Parker invention were: (1) the so-called attendant-controlled elevators, which we find in the majority of large buildings where traffic conditions are severe, and (2) the full-automatic elevator, which is found in many apartment houses and in some office buildings.

Attendant-Controlled Elevators.

The attendant-controlled elevators may be briefly described as comprising an elevator or cage operating up and down in a well or hatchway past the floors it serves. An attendant or elevator operator rides on the car to directly control its movement and to insure the safe transportation of the passengers. These elevators are provided with push-buttons, operating through floor selectors, which enable the passengers to signal an elevator car to stop at the desired landings.

A general understanding of the mechanism embodied in such elevators is necessary to the determination of several of the issues in this case.—

First, as will be noted from Judge James' decision, he found it necessary to consider only the mechanism in use in these attendant-controlled elevators, plus the mechanism in use in the common full-automatic apartment-house type of elevators, to arrive at the conclusion that there was nothing basically new in the Parker patent.

Second, it will be later shown that the scope pretended for some of the claims of the Parker patent is so broad as to include the common attendant-controlled elevators, and to be anticipated thereby.

Third, plaintiff, in making a pretended comparison of the defendant's apparatus with the apparatus of the Parker patent, has very astutely identified in both apparatuses merely the devices which were a common part of every elevator, failing to compare defendant's elevators with any of the automatic stopping mechanisms of the Parker patent.

Fourth, the evidence shows that both plaintiff and defendant, in making their automatically stopping attendant-controlled elevators, utilized for the push-button control merely the ordinary push-button circuits used on attendant-controlled elevators for signal-ling the elevator to stop the car, and did not use the inoperative control means shown in the Parker patent. And,

Fifth, the evidence shows that, once a successful means had been developed for the automatic stopping of a high-speed elevator car, it was at once apparent to the elevator engineer that the ordinary signal circuits of attendant-controlled elevator cars could be used to prepare this new slow-down and stopping

mechanism to operate; and it is admitted in the testimony of plaintiff's experts that this was in mind and apparent to elevator engineers prior to the alleged Parker invention.

Every common, ordinary attendant-controlled elevator possesses a primary circuit leading from a car-switch to a pole-changing switch, which car-switch could be moved in one direction to operate the pole-changing switch to start the motor in one direction and which car-switch could be reversed to start the motor in the opposite direction. This is admitted in the testimony of plaintiff's engineer Crabbe.—

"The patent describes any known means for starting the motor. It was old in elevators or in printed descriptions of elevators at the time of the Parker patent, say as early as prior to the summer of 1920 to have a car switch in a car which controlled the circuit to the pole-changing switch which pole-changing switch controlled the drive to the car.

"It was not new to show that schematic arrangement for the operation of the pole-changing switch from a contact in the car switch.

"In that old mechanism the car switch could be passed in one direction to open the pole-changing switch to start the motor in one direction and the switch could be reversed to start the motor in the other direction through the pole-changing switch."

[R. 207.]

It is further admitted in the patent that there was nothing novel in either the motor circuit of the Parker patent (Figure 2 of this brief) or the primary circuit (Figure 1 of this brief) except the particular construction of the car-switch.—

"No fundamental change is contemplated in the driving or starting mechanism of the system, but only in the master control switch situated within the car itself." (patent, p. 1, lines 49-53.)

The signal circuits used in the common attendant-controlled elevators are illustrated in the Smalley & Reiners patent, Defendants' Exhibit X-11 [R., Vol. 3, pp. 341-60]. These signal circuits are of the same type as were before this Court in the case of Randall Control & Hydrometric Corporation v. Elevator Supplies Co., 15 Fed. (2d) 767. The evidence establishes that defendants, in the elevators complained of herein, employed a Randall signalling system, for many years a common commodity in the elevator art, and used the same in its automatic-stopping elevators.

In Figure 8 of this brief we have reproduced an example of the secondary control circuits of the Smalley & Reiners patent, indicating the operation of the circuits set up by pressing the fourth floor "up" hall-button. In this Figure we have used the identical symbols employed in the Smalley & Reiners patent to indicate the different magnets, push-buttons, etc., so that the circuit may be more readily found in the Smalley & Reiners patent. There are three circuits in the selector means of the Smalley & Reiners patent. These are:

- 1st, a circuit which is immediately completed when the hall-button is pressed to energize a magnet to close a switch leading to a selector;
- 2nd, the circuit from this thus closed switch to the selector, which when completed by the selector operates a flashlight in the elevator car; and

3rd, an independent circuit connected with the independent contacts on the selector to be completed as the car leaves the floor after the stop for energizing a magnet to reset the switch connected with the selector.

The first circuit may be traced on the drawing, Figure 8, as follows: From the generator positive through the line V, through a night-bell W¹, line X, through the hall-button D, through line E⁴, through the magnet T⁴ and line X³ to the generator minus. The magnet T⁴ when it is energized closes a mercury dash-pot switch S⁴ leading to the floor selector.

The second circuit may be traced from the battery plus through the line b, through the flashlight B in the elevator car, through the line b' to the contact strip M², thence by the moving bridge K³, K⁵, to the contact 6 of the selector, thence through switch S⁴ and line f³ to the battery minus. This second circuit is completed when the car arrives at a fixed distance from the landing in order to indicate to the operator, by lighting the flashlight B, that the car is to stop at the landing.

The third circuit may be traced from the generator positive through the line 82, through the button C in the car, thence by line 81 to the strip M³ of the selector, through the bridge K⁴, K⁻, contact 11 of the selector, line 80 and reset magnet R⁴, line 83, line X³ to the generator minus. This circuit is completed after the car has stopped at the landing and left the floor, and its purpose is to energize the magnet R⁴ to pull the switch S⁴ again to the open position so that no other car will stop at the landing until the hall-button is again pressed. The button C in

the car is employed by the operator to preventing resetting of the switch S⁴ in case he deliberately passes the landing, or in case, after he stops at the landing, he finds that he cannot take into his elevator car all of the waiting passengers.

The secondary control circuits of the Smalley & Reiners patent, and particularly the second one herein described, should be compared with the secondary control circuits of the Parker patent, particularly with the secondary circuit for the hall-button as illustrated in Figure 4 of this brief. Comparing these two circuits, they will both be found to possess:

- (a) a switch manually closed by a waiting passenger, that is, the switch S⁴ of the Smalley & Reiners patent and the switch j² of the Parker patent.
- (b) In each case these manually closed switches are in circuit with the contacts of the floor selector, being the contact 6 of Smalley & Reiners and the contact f² of Parker.
- (c) In both the Parker patent and the Smalley & Reiners patent, the selector has a moving arm which is to complete the secondary circuits, this moving arm being the bridge K³, K⁵, in Smalley & Reiners, and the arm 34 of Parker.
- (d) In each case, in the same circuit with the aforementioned devices, there is provided means for stopping the car. In Parker this means is the neutralizing magnet 37, while in the Smalley & Reiners patent this means is the flashlight B.

There was nothing new in the secondary control circuits of the Parker patent. These circuits were already in every common, ordinary car-switch elevator. The only pretended novelty of the Parker patent was in using these

circuits already present for the purpose of unlatching Parker's new form of master control switch. Clearly, Parker did not make any such broad, generic and pioneer invention as would justify construing his patent to cover the use of these old, well-known signal control circuits for signaling or preparing an elevator car to automatically stop at a landing independent of the particular instrumentalities by which these signal control circuits were connected with the elevator mechanism to cause the stopping of the elevator car. Yet plaintiff's position in this case, when analyzed, is simply that if one employs the old carswitch elevator and the old signal circuits and in addition thereto causes the car to stop automatically when the pushbuttons of the signal circuits are pressed, (independent of the means or instrumentalities connected with the signal circuits for stopping the car,) the Parker alleged invention is embodied. In other words, if defendants employ wellknown expedients common to any elevator and by any means at all cause the elevator to produce the same ultimate functions or results sought in the Parker elevator, such an elevator embodies the Parker alleged invention. This is a subterfuge by which plaintiff endeavors to avoid the rule that one cannot patent the function or mode of operation of a machine. The rule is sought to be avoided, not by identifying any of the means for stopping of the Parker patent and comparing the means with defendants' elevators; plaintiff compares only so much of the elevators as was admittedly old and in common use, and then also compares the functions. The only mention which plaintiff makes in its brief of the signal control circuits which were common in car-switch elevators is the statement under the heading of "Smalley & Reiners Patent," as follows:-

"But defendants do not adopt any of the prior art starting and stopping controls, most of which they are free to use." (Pl'ffs Br., pp. 167-8.)

Plaintiff's statement that defendants are entitled to employ the prior art starting and stopping controls is clearly sound in law. But plaintiff's statement that defendants have not employed the prior art starting and stopping controls is directly contrary to the undisputed evidence in the record. The signal control circuits employed by defendants are not only identical with the signal control circuits of the ordinary car-switch elevator, such as are illustrated in the Smalley & Reiners patent, but defendant actually purchased these signal controls on the open market, using some of these signals to equip its manually controlled elevators and some of them to equip its automatic stopping elevators. The signal control apparatus in common use in car-switch elevators previous to the Parker patent were before this Court in Randall Control & Hydrometric Corporation v. Elevator Supplies Co., 15 Fed. (2d) 767. In the first automatic stopping elevators made by defendant it used signal systems purchased from the Elevator Supplies Company. In the elevators complained of herein it used signal systems purchased from the Randall Control & Hydrometric Corporation [R. 372]. It did not use with these signal systems any of the means disclosed in the Parker patent for causing them to stop an elevator. As we shall later show, in discussing defendants' system, these signal control circuits so purchased on the open market were substantially identical in means with those of the old Smalley & Reiners patent. They each include a manually operated switch operated by the push-button, which manually controlled

switch was in the same circuit with a switch on a floor selector and also in circuit with a device for indicating to the operator that the car was to stop at the floor. It will be further noted that in the later forms of these signal systems, in place of the flashlight itself being in the secondary control circuit, a relay or magnet was substituted for the flashlight, which closed a second circuit to the flashlight. The fact that the circuit to the selector in the machine of the Smalley & Reiners patent does not itself include the push-button, but instead a switch closed by the push-button, of course is immaterial. No point can be made by plaintiff of this difference, because the same difference is in defendants' system. Thus plaintiff's expert Sessions testified with respect to defendants' system:—

"In the hall push-buttons in the defendants' device there is a circuit intermediate the actual push-button circuit and a circuit which includes the two gaps in series. This circuit that is intermediate has one of its gaps closed when the push-button is operated, and the other gap is closed later; but neither one of these gaps is in the original push-button circuit operated by the waiting passenger." [R. 543-4.]

No possible invention could be ascribed to the mere idea of using these old signal circuits in an automatic-stopping elevator independent of the means or instrumentalities by which the elevator was caused to automatically stop after the actuation of these old signal circuits. In the first place, it must be remembered that invention does not reside in an "idea", but the court must find that with this "idea" in mind, the devising of means for producing an elevator embodying the "idea" required the exercise of inventive skill.—

"The idea occurred to Treat to device a plug which would take either, and this was a novel and useful idea; but invention is not involved in a mere idea. The question always is whether the article devised to carry out the idea involves invention or only ordinary mechanical skill."

(Treat v. Red Top Electric Co., 271 Fed. 307, at 308 - C. C. A. 2nd Cir.)

But even the idea was not new with Parker. It was in the minds of all electrical engineers. Attendant-controlled elevators which were stopped automatically by push-buttons were not in use in 1920, because means had not been devised by which the elevator car could be stopped automatically when traveling at high rates of speed. As soon as these means were devised, they were operated by the old push-button circuits, and did not include anything invented by Parker. Plaintiff's experts admit that long prior to Parker, and during their work on means for stopping high-speed elevator cars, it was apparent that push-buttons should eventually be used to operate the same. Thus plaintiff's expert Crabbe testified:—

"As to how long the Otis Elevator Company recognized the need of an elevator that performs the functions of the Parker patent, I remember a conference occurring in the office of Mr. Lindquist, the Chief Engineer, shortly after the Armistice was signed, in which a general discussion of automatic stopping of car switch control elevators was had."

[R. 266.]

Crabbe further admitted that at the time the "idea" occurred to him it was obvious to accomplish this automatic stopping by push-buttons on the floors and in the cars.—

"I presume that the obvious way at that time was to do it by push buttons on the floors and in the cars. I cannot recall whether that was actually said to be the best way or not but I imagine that was what was considered." [R. 266-7.]

The use of push-buttons connected with floor selectors in combination with a device for breaking a running circuit of an elevator to stop the car, was also old in the art. This is admitted by plaintiff's expert Crabbe:-

"It was not new in the industry to have a pushbutton which would close and open the pole-changing switch through an automatic floor selector."

[R. 207.]

The Secondary Control Circuits of the Smalley & Reiners patent being therefore old in the art, and it being also old to use similar circuits for stopping elevator cars, Parker clearly could not monopolize the use of these old circuits, except possibly to cover the particular way and means devised by Parker for combining together these old signal circuits and a car-switch. The Secondary Control Circuits being old in the art, they were open for anyone to use for any desired purpose, as long as one did not employ therewith the particular combination of the Parker patent.

The case of *Electric Railroad Signal Co. v. Hall Rail-way Signal Co.*, 114 U. S. 87, 29 L. ed. 96, is particularly in point. The Supreme Court there had under consideration a patent dealing with electric switches, circuits and relays used in a railway signal control system. It was urged that the patent in suit covered and could dominate a certain scheme or idea of signal operation, independent

of the particular devices described in the patent for that purpose. The defendant employed only apparatus which was old in the art, and employed none of the particular novel devices of the patent in suit. But the defendant also used the same idea or process of signaling trains, known as the "block" signal system, as first described in the patent in suit. The Supreme Court held that inasmuch as defendant's system did not have any of the novel devices of the patent in suit, and did not have any of the devices combined together in the same way as the patent in suit, that the patent was not infringed. The Court held specifically that one could not exclude the art from using in a signal system devices well known in the art. Any other decision would of course have given the patentee a monopoly upon an idea, even though one employed nothing new in the way of instrumentalities in carrying out the idea. The Court said (p. 98):-

"In considering them it is important to bear in mind that the patent is for a combination merely, in which all the elements were known and open to public use. No one of them is claimed to be the invention of the patentee. He does not claim them himself as separate inventions. It is simply a new combination of old and well-known devices, for the accomplishment of a new and useful result, that is claimed to be the invention secured by the patent. And the well-settled principles of law heretofore applied to the construction of patents for combinations merely, must apply and govern in the present case.

"The object of the patented combination was the accomplishment of a particular result, that is, to work electric signals on what was known as the

'block' system, by means of circuits, operated by a single battery instead of many. But this result or idea is not monopolized by the patent. The thing patented is the particular means devised by the inventor by which that result is attained, leaving it open to any other inventor to accomplish the same result by other means. To constitute identity of invention, and therefore infringement, not only must the result attained be the same, but in case the means used for its attainment is a combination of known elements, the elements combined in both cases must be the same, and combined in the same way. so that each element shall perform the same function, provided, however, that the differences alleged are not merely colorable, according to the rule forbidding the use of known equivalents." (Italics ours.)

Full-Automatic Elevators.

The common full-automatic elevator may be briefly described as an elevator which is provided with push-buttons at the floor landings and in the car, whereby the elevator can be started and will be stopped automatically. These elevators have been in common use in installations where there was only an intermittent use of the elevator, such as in smaller office buildings, apartment-houses and private dwellings. In these elevators there is no attendant riding in the car, the car being controlled entirely by the passengers using it.

In such elevators, the floors served by the car are provided with push-buttons at the floor landings, which may be operated by the person desiring to use the car. The pressing of a button operates a starting switch for the car which keeps the car in motion until it approaches

the desired floor. A floor selector, which is in the same circuit with the switch closed by the push-button, operates to open the starting circuit and stop the car at the floor. Also in the car itself there are a number of push-buttons, one for each floor served by the car, which may be pressed by persons in the car to operate the starting switch and cause the car to go to the corresponding floor, where it will be stopped by the floor selector, just as in the operation of the hall push-buttons. These elevators are intended to be operated without any attendant, and are therefore made "non-interfering" by the use of a "non-interference" magnet, by which, after the elevator has been signalled for starting and stopping by one push-button, no other push-button can control or affect the operation of the car. Yet we have all had the experience of riding in these elevators, when this noninterference magnet did not work, and when the elevator did stop at floors in response to the signals of other persons. It hardly could be pretended that it would amount to an invention to either omit the non-interference magnet or to fix the same so that it would not operate efficiently.

The mechanism within the common full-automatic elevator is, in one form at least, illustrated in the Ihlder Patent, Defendants' Exhibit X-13 [Record, Vol. 3, pp. 369-382].

Judge James stated:-

"On October 7, 1902, a patent was issued to J. D. Ihlder (No. 710914). Ihlder's system included a single push button at each floor and push buttons in the car by which the car would be started and

would automatically stop at the indicated floor. He further provided that the system should be 'non-interfering', in that after a button indicating a particular floor was once pushed, the pushing of another button on another floor would not stop the car before it reached the first indicated stopping point. One of the features of the Parker system is that the car will be stopped at the different floors in succession where several buttons have been simultaneously or successively set. Ihlder had the particular purpose of making his non-interfering, but as defendants' counsel argues, the mechanism of Ihlder's system might easily be adjusted, using ordinary engineering skill, so as to be either 'interfering' or 'non-interfering.'" [R. 638-9.]

The essential elements of the control circuit of the Ihlder patent are reproduced on the drawings, Figures 9 and 10 of this brief. In the drawing, Figure 9, we have illustrated the operation of the elevator, assuming that the sixth floor button g⁶ is pressed. The circuit set up may be traced either on the drawing, Figure 1 of the Ihlder patent, or the drawing, Figure 9 of this brief. The circuit is described by Ihlder as follows:—

"* * the button g⁶ is pressed for an instant, closing the circuit, which may be traced through the conductor H, contacts h' to h⁶, through the circuit-breaking magnet E, the coils of which are wound in opposition, through the armature E' and conductor e⁶ to conductor d⁶, through the coil of the corresponding circuit-making magnet D to the brush f⁶, bearing on the contact C⁴. Thence the current passes to the brush c' through the coils B¹⁰ of the electric reversing-switch B to the minus main."

[Record, Vol. 3, p. 377, lines 57-68.]

Ihlder also discloses a holding magnet and a holding circuit energized thereby, rendering it possible to release the starting switch without interrupting the running circuit to the pole changing switch. This holding magnet and holding circuit are described by Ihlder as follows:—

"In order to overcome the necessity of holding the push-button g⁶ in contact position and in order to prevent interference with the elevator when it has once started, the circuits are arranged so that immediately on completion of the circuit closed by the push-button g⁶ the circuit-making magnet D attracts its armature D', making a parallel and shorter circuit through the door-contacts h' to h⁶, conductor H, through one coil only of the circuit breaking magnet E and the armature and coils of the circuit-making magnet D, through the brush f⁶, and out, as before."

[Record. Vol. 3, p. 377, lines 92-104.]

The motor circuit shown on Figure 10 of this brief is practically a duplicate of the motor circuit of the Parker patent shown on the drawing, Figure 2 of this brief. The only substantial difference is that Ihlder illustrated the circuits for the fields of the motor. The motor circuit is described in the Ihlder patent as follows:—

"This energizes one of the magnets of the electric reversing-switch, moving the armature B³ thereof in the proper direction, causing its double-faced contact b b' b² b³, respectively, to make contact, say, with the contacts b⁴ b⁵ b⁶ b⁻, thus closing the circuit of the motor, which may be traced as follows: from the plus main through the contacts b⁴ b to bindingpost a, whence a branch includes the brake-magnet A³. From post a extends a conductor to the series field-magnet coils A², thence through the binding-

post a³, contacts b′, b⁵ b¹⁰, binding-post a², through the armature to binding-post a′, contacts b⁰ b⁶ b² b³ b⁵, and out, thus causing the motor to rotate in a certain direction to raise the elevator."

[Record, Vol. 3, p. 377, lines 68-83.]

Comparing the Ihlder patent with the Parker patent in suit, it will be noted that the main difference resides in the fact that Ihlder combined together the primary control circuit and the secondary control circuit in order that one push-button would serve both the purpose of starting and stopping the car. Comparing the control circuits of Ihdler (Figure 9 of this brief) with the primary circuit of Parker (Figure 1 of this brief), it will be noted that both circuits include a starting switch (switch g⁶ in Ihlder, and the car switch 9, 10 in Parker). In each case a circuit leads from the starting switch through the coil of a pole-changing switch, coil B¹⁰ in Ihlder, coil 16 in Parker. In each case the effect of closing the starting switch is to energize a pole-changing switch, and in each case to close the motor circuits. The motor circuits are identical. As seen from comparing Figure 2 of this brief, showing the motor circuit of the Parker patent, with Figure 10 of this brief, showing the motor circuit of Ihlder, both of these circuits merely include contacts of a pole-changing switch which connect the motor with the plus and minus mains. It will also be observed, by comparing Figure 9 with Figure 1 of this brief, that the closing of the starting switch, both in Ihlder and in Parker, energizes a holding magnet to establish a holding circuit. The holding magnet is 32 in Parker, and is D in Ihlder. In both cases the starting switch may now be released and the elevator continued in operation.

The master in his report apparently entirely overlooked the presence of this holding magnet D and holding circuit in the Ihlder patent. He stated with respect to the Parker patent:—

"Passing through the coil 32 he has added another circuit not found in the prior art. This circuit is set up by the bridging of the contacts 9 and 10 and it results in removing the control from the operator's manual switch. The idea of a self-holding switch was not new but the application of that principle here is novel."

[R. 561-2.]

By this it is apparent that the master was of the opinion that while self-holding circuits were old in the art, the art had never employed the same for the purpose of holding a starting circuit to an elevator motor closed. Clearly, without question, the master has erred, as this identical holding circuit is as fully and completely described in the Ihlder patent as it is in the Parker patent. Moreover, Ihlder's self-holding circuit will operate, where Parker's is inoperative for the reasons heretofore given.

The circuits set up for stopping the car, in the Ihlder patent, are likewise identical in operative means with those utilized in Parker. This can be seen from a comparison, for example, of the circuit, Figure 3 of this brief, showing the Parker secondary control circuit, with the circuit, Figure 9 of this brief, showing the Ihlder secondary control circuit. In both cases we will find that a circuit leads through the switch used to start the car: the switch 10, 11 of Parker, and the switch g⁶ of Ihlder. This same circuit also includes the push-button used to stop the car: the push-buotton d², b² of Parker, and the push-button g⁶ of Ihlder, the difference here being only

that one push-button in Ihlder is intentionally made to accomplish both the purpose of the starting switch and the stopping switch. The circuit in both cases also includes the contacts and brushes of a floor selector; the contact f² and ring g and brush 34 of Parker, and the brushes c', f⁶, and ring section C of Ihdler.

These circuits differ from each other only in that Ihlder's selector operates to directly open the starting circuit, whereas Parker energizes a neutralizing magnet 37, which opens the car switch 10, 11 to break the starting circuit. No claim of the Parker patent is founded upon any such distinction in means, and if this distinction in means be an essential element of any claim of the Parker patent, as we will show hereinafter, the claim would consequently then not be infringed by the defendant's system, because defendant finally opens the circuit, which is established to start the car, by a switch opening in that circuit, rather than by energizing a magnet through the selector to in turn open that starting switch. (Furthermore, it will be shown that the circuit through defendant's selector has no connection at all with the opening of defendant's primary circuit which is closed when the car switch is closed, the apparatus which opens this primary circuit being a totally independent apparatus.)

The master in his report differentiated the Ihlder patent from the Parker patent, not in any essential attribute of means or devices, but merely in the major purposes intended by Parker for his system, and Ihlder for his system. The master pointed out that Ihlder deliberately intended the push-button circuits should not be interfering, stating:—

"'Again the system is non-interfering, in that when a push button at one floor has been pressed the pressure of any push button at other floors will not interfere with the operation of the elevator.' Page 1, lines 56 to 60, Ihlder patent.

"One of the principal features of the patent in suit is that it provides a means whereby a passenger can stop the car and enter it after it has been started by the operator. The Ihlder control provides means for starting the car from a landing, a feature that would be undesirable in Parker's control. Ihlder does show a floor selector much the same in principal as Parker's. The differences in function pointed out result from differences in structure. There is no holding circuit in Ihlder which can be broken by any stopping circuit set up either in the car or at the landings. The running circuit once established can be broken only by one stopping circuit, the selection of which is made when the car is [Master's Report,-R. 560-1.] started."

We have before shown that the master erred when he said that in Ihlder there was "no holding circuit." Ihlder shows a holding circuit that is identical with the holding circuit of Parker. The only difference that can be drawn between the structures is that Ihlder did not employ the particular construction of Parker's so-called "master control switch," which it is admitted nobody ever employed, and which is admitted to be a "step backward" in the art.

Correcting the error in the master's report, concerning the holding circuit, the only difference that the master found between Ihlder and Parker was that Ihlder intended his elevator to be non-interfering, and for this purpose he provided, (as labeled on the accompanying Figure 9 of this brief,) the non-interference magnet E,

which would prohibit and prevent any other push-button stopping the car after the car had once been started by the operation of one push-button. It could hardly be classified as an invention to either place the non-interference magnet out of commission, or omit it from the system, or to make simple arrangements so that the push-buttons could stop the car to take on other passengers when desired. And in this connection we again refer the Court to that standard of ability possessed by the elevator engineer which plaintiff has insisted upon in its attempts to show that the Parker patent was operative. In view of all of those things which were within the ready ability of the ordinary electrical engineer, how can plaintiff contend that such a simple change could have required any exercise of the inventive faculty? Judge James clearly was correct in his decision that it would not be an invention to modify the Ihlder patent so as to eliminate this non-interfering magnet. It was placed in Ihlder for the express purpose of preventing passengers at different floors from interfering with each other. It was something which may have required invention to incorporate into the system, but would not be an invention to omit. Judge James stated:-

"Ihlder had the particular purpose of making his non-interfering, but as defendants' counsel argues, the mechanism of Ihlder's system might easily be adjusted, using ordinary engineering skill, so as to be either 'interfering' or 'non-interfering.'" [R. 639.]

Plaintiff throughout its brief filed before this Court seeks to create the erroneous impression that Judge James misunderstood the Parker patent. Plaintiff says with respect to his opinion:

"In other words, while quoting from the Parker patent, he reads the Parker disclosure as contemplating the use of *push-buttons* located both in the car and at the landings *for starting the car*." (p. 128.) (Italics plaintiff's.)

On page 128 plaintiff says:-

"* * * he refers to the drawings as showing [R. 636]—

"'means through electrical circuits whereby, by the operation of the push buttons, the power of the hoisting motor would be applied."

(Italics plaintiff's.)

In Judge James' decision there is no period following the word "applied". Following the word "applied", appears:—

"and shut off, and circuit means whereby the push buttons, after the car reached the predetermined floor, would be reset. The master's report may be referred to for a more complete description of the Parker device. Distinguishing characteristics of that device are: When the manual control lever in the elevator car is moved to an up position, it moves a contacting plate across separate terminals, which complete the circuit to operate a switch on the driving motor and the car moves upward." [R. 636.] (Italics ours.)

It is ridiculous for plaintiff to argue that Judge James did not understand that in the Parker patent the car was started by the car-switch and not by the push-buttons. (*)

^(*) Plaintiff relies on an obvious typographical error in Judge James opinion as the basis for its assertion that Judge James misunderstood the Parker patent, and at the same time argues that the master correctly described the defendants' system. Yet plaintiff has found it necessary to make at least ten corrections in the description of the defendants' system, contained in the master's report (Pl'ffs Br. pp. 50-52).

Judge James correctly found that the Ihlder structure disclosed everything plaintiff claimed was novel in the means of the Parker patent. It was admitted that previous to any invention alleged by Parker, every carswitch elevator possessed a car-switch for starting the elevator and push-buttons and selector circuits for signalling the elevator to stop. All that Parker did was to suggest that the selector should automatically interrupt the running circuits to the pole changing switch and thus break the current to the hoisting motor. This was identically what was done in the prior art full-automatic pushbutton elevators. The selector there is made to break the running circuit to the pole changing switch magnet B10 which immediately breaks the motor circuit (Figure 10 of this brief) and the car is stopped by the application of the electro-mechanical brake A³. Elevator engineers knew exactly how to do what plaintiff claims was first discovered by Parker. They knew that the push-buttons in carswitch elevators could be made to cut off all the power to the elevator and set the electro-magnetic brake to automatically stop the car. This is all that Parker discloses.

Finally, plaintiff asks a question as follows:-

"If, as the lower court suggests, ordinary engineering skill could have rendered the Ihlder circuits either interfering or non-interfering, why was this not done?" (Pl'ffs Br., p. 131.)

This question has been directly answered earlier in this brief. To automatically stop an elevator by opening all of the circuits and applying the brake abruptly to the elevator car was useful only in low-speed elevators. Low-speed elevators could be used only where traffic condi-

tions are not severe. For such use it is desired that the elevator be full-automatic, so that the expense of an attendant is obviated.

Plaintiff also states:-

"Defendants are free to use the Ihlder patented structure as the patent expired more than thirteen years ago. Why didn't they use it instead of appropriating the Parker invention?" (p. 132.)

Plaintiff actually complains only because defendants do not employ the non-interfering magnet of Ihlder. Defendants do employ the push-button circuits shown in Ihlder, but without the non-interfering magnet. Plaintiff has not pointed to any feature of the push-button circuits employed by defendants which is described in the Parker patent but not in the Ihlder patent.

Prior Patented Elevators.

We have described the common attendant-controlled elevator and the common full-automatic elevator which were in use at the time of the alleged Parker invention. These types of elevators were in use after the development of the high-speed electric elevators. Before the advent of the high-speed electric elevators, many different types of automatic-stopping elevators were in existence. The first elevators which appeared in use were hydraulic elevators, and these elevators were first operated by mechanical devices. The next step in the art was the replacement of the mechanical devices by electric circuits, relays, magnets, etc., for operating the hydraulic motors. The idea of automatically stopping an elevator car from a push-button is almost as old as the art of elevators itself. Elevators were stopped by push-buttons, before there were electric

elevators, when elevators were operated by purely mechanical devices. Obviously, the first thing that would occur to anyone who thought of automatically stopping an elevator car would be to merely imitate automatically the motions that the elevator operator went through manually. The elevator operator manually moves a lever or starting device in one direction to start the car, and moves a lever or starting device in the opposite direction to stop the car. An examination of the early patents in the art shows that this is exactly what was done in the first automatic elevators. They were manually started by the attendant within the car moving manually a starting device. Then push-buttons were provided corresponding to the different floors within the car, which operated with selector cams at the floors for pushing the starting device again to the "off" position when the car arrived at the floor. Such devices are shown in numerous prior patents. They are shown in the patents to Nistle (Def'ts Exhibit X-14), Crouan (Def'ts Exhibit X-1), Worthen (Def'ts Exhibit X-15), and others.

The fact that Parker was unfamiliar with the elevator art led Parker to believe that what had been many times patented and used years before the date of the alleged Parker invention was new with him. Long prior to Parker's alleged invention the elevator art had abandoned any idea of stopping an elevator car by automatically returning to the "off" position the device moved by the elevator operator to start the car. The sole novelty of the Parker patent is correctly stated in the patent to be the provision of a means for electrically latching the car-switch in the running position and for automatically unlatching this car-switch by push-buttons when the car arrives at the landing. The master correctly found that

the use of such a device would be a step backward in the art.—

"The actual form of his car switch is possibly a new form of a self-holding switch but it is evident that his form of switch was not an improvement. It was but a crude conception when compared with older means. At that time engineers had learned to put as many of the control circuits as possible in the pent-house and not in the car. It would be a step backward to bring the secondary circuits through the car."

[Master's Report,— R. 562.]

Plaintiff defines the Parker invention as a control in which the operating and driving mechanism can be started only by the operator manually throwing the car-switch to the "on" position, and stopped in response to push-buttons either in the car or at the various landings.—

"He finds that the Parker 'Control' so dominates the rest of defendants' elevator operating and driving mechanism that the cars can be *started only* by the operator manually throwing the car switch to 'on' position, and are stopped in response to buttons pushed either in the car or at any of the various floor landings, and the car thereby brought to rest, at the desired floors, in proper sequence." (Italics plaintiffs.) (Pl'ffs Br., p. 47.)

Plaintiff goes further than this. Plaintiff says that it is "unnecessary to go into the various ramifications and details of additional electrical relays, * * *" (p. 47). These assertions made by plaintiff are manifestly unsound in view of the prior art. The early automatic elevators could be started only by the operator manually throwing a starting device or switch in the car and could be stopped in response to push-buttons either in the car or at the

various landings and the car thereby brought to rest at the desired floors in proper sequence. None of the earlier automatic elevators had the particular non-interfering feature of the full-automatic elevator shown in the Ihlder patent.

The patents to Crouan (Def'ts Exhibit X-1), Bullock & Hanson (Def'ts Exhibit X-2), Nistle (Def'ts Exhibit X-14), each shows the old hydraulic elevator provided with a mechanical control in which there is one device within the car for the attendant to manually operate to start the car and in which there are a plurality of mechanical push-buttons which can be operated in any desired order for thereafter automatically stopping the car. The patents to Strohm (Def'ts Exhibit X-10) and Worthen (Def'ts Exhibit X-15) disclose electric controls for elevators provided with push-button-operated electric switches for automatically stopping an elevator which is manually started by an attendant.

The prior art not only had Parker's plan of automatically stopping the car by automatically returning the carstarting device or switch to the "off" position, but the elevator art had developed other automatic stopping elevators in which the car is started by a car-switch but in which the push-button circuits were caused to interrupt the running circuit to the car without acting through the car-switch itself (Strohm). Electric control circuits using push-buttons were known both for push-buttons outside and for push-buttons inside the car. It is not our intention here to burden the Court by referring to a large number of these patents. We intend only to refer to sufficient thereof to show that there was nothing new in the Parker patent in using secondary control circuits con-

nected with push-buttons either at the hall or in the car for opening the primary running circuit of an electric control for an elevator to automatically stop the car. Judge James in his opinion correctly stated:—

"It would only serve to prolong this opinion to unnecessary length were I to discuss and analyze the several prior art patents which were introduced in evidence, all referring to systems for the starting and stopping of elevator cars by electrical means, including the use of push-buttons at the floors and in the car. All of these are illustrated in the exhibits and in the printed brief filed by the defendants. As to the form and mode of operation of the devices represented, there is no dispute. They are all cumulative evidence to the point that at the time Parker conceived his invention the art in which he was working was highly developed."

[R. 639.]

Strohm Patent (Defendants' Exhibit X-10).

This patent discloses an elevator which is operated by a device within the car for starting the elevator, and stopped by means of push-buttons at the hall landings. Two forms of elevator are shown, one in Fig. 1 of the patent, in which a control rope A passes through the car, to be pulled by the attendant to start the car in either the "up" or "down" direction, and the other, in Fig. 2, wherein the ordinary electrical car-switch is provided within the car. The motor for driving the elevator in Strohm is an hydraulic motor. In an elevator driven by an hydraulic motor, the elevator car is moved up and down in the shaft by the operation of a piston moving in an hydraulic cylinder. Water is admitted into the cylinder or discharged from the cylinder to lower or raise the elevator car. The direction of the flow of water is controlled by

valves. These valves are operated by magnets, one magnet for "up" direction and the other magnet for "down" direction. Any electrical equipment which is suitable for starting, stopping or controlling an electrically-driven elevator is equally adapted for controlling an hydraulic elevator, and vice versa. The only difference between the two systems is that in case of the electric elevator, the primary circuit energizes a coil of a "pole-changing switch," whereas in the case of an hydraulic elevator the primary circuit energizes the coil of a "valve mechanism."

The primary control circuit of the Strohm patent and the secondary control circuit of the Strohm patent are reproduced respectively as Figures 11 and 12 of this brief. In the Strohm patent, two different forms of elevator are illustrated.

First.— In the form shown in Fig. 1 of Strohm there is a rope within the car which operates a switch for energizing a holding and releasing magnet which closes the primary circuit to the "up" magnet of the hydraulic motor. The primary circuit operated by the control rope is the first circuit on Figure 11 of this brief. The rope closes a switch to energize the magnet f which closes its contact 67 and establishes the primary circuit which may be traced from the positive main through the switch 67, through the "up" magnet H to the negative main. The magnet H is the magnet which opens the "up" valve on the hydraulic motor.

Second.— In the form shown in Fig. 2 of the Strohm patent, a car-switch is employed and this car-switch has its contacts directly in a primary circuit. This circuit is the second circuit on Figure 11 of this brief. As there illustrated, there is a car-switch 85 which can be moved

in one direction to make contact with contact 86 to energize the "up" magnet. If it had been moved in the opposite direction, it would have contacted with contact 87 to energize the "down" magnet. We have shown the switch in the position it is moved to energize the "up" magnet. The circuit so completed may be traced as follows: From the battery plus through a fuse, through the contact 67 of the holding and releasing magnet f, through certain contacts of switches 83, 84, which are on the doors of the elevator car, through the car-switch 85 and its contact 86, thence through the line 82 and a fuse, through the coil of the "up" magnet H to the negative main.

Comparing this primary control circuit (Figure 11 of this brief) with the primary circuit of the Parker patent (Figure 1 of this brief), it will be seen that the two circuits each contains the following:

- (1) Each circuit includes the contacts of a carswitch, (the contacts 10 and 11 of Parker, and the contacts 85 and 86 of Strohm);
- (2) Each circuit includes a direction magnet (the magnet 16 of Parker's pole changing switch and the magnet H of Strohm's "up" valve);
- (3) Each circuit includes an element of a holding and releasing magnet (the magnet f of Strohm and the holding magnet 32 of Parker).

The secondary control circuit of Strohm is illustrated in Figure 12 of this brief. This circuit includes identically the same three elements which are present in the secondary control circuits of the Parker patent. That is, it includes the coil of the holding and releasing magnet f; it includes a push-button switch F, and it includes a switch

pperated by a selector 29. The circuit is copied from Fig. 1 of the Strohm patent, in which the rope control was employed, and it includes the contacts b and d used with the rope control. Strohm did not illustrate the form of secondary control circuit to be used with his elevator with the car-switch shown in Fig. 2 of the Strohm patent. In Fig. 2 he shows a circuit leading to the holding and releasing magnet f extending only through certain door-contacts, but he states:—

"It will of course be understood that with the modified form of device shown in Fig. 2 push-buttons may be provided on the landings for stopping the elevator thereat, as explained above, but for the purpose of clearness I have omitted said push-buttons and the accompanying elements from this view."

[Record, Vol. 3, p. 335, lines 79-85.]

The contacts b and d in the secondary control circuit would be omitted using the second primary control circuit shown on Figure 11 of this brief, because in such case the starting switch has been placed in the primary circuit as shown by the car-switch 85. Tracing the secondary control circuit of the Strohm patent, the circuit leads from the battery plus to the line 4, thence by contacts b and d which are closed by the rope through the holding and releasing magnet f, thence through a number of safety devices and contacts on the elevator doors illustrated by 71, 73, 74, and 7 and 8 (part of this circuit being grounded through the car itself), thence to two parallel circuits, one leading to contacts 19 and 20 of the hall push-button F and the other leading to contacts 29 and 32 upon the selector switch which is to be operated by the shoe G on the car. Thence the circuit leads

through a plurality of other hall-buttons and selector switches represented by the break in the circuit, through the line 5 to the battery minus.

This circuit operates as follows: If the push-button F is pressed, it disconnects contacts 19 and 20. The circuit is still established for energizing the holding and releasing magnet f which must be energized to hold the primary circuits closed. When the shoe G on the car strikes the selector switch 29, this switch is likewise opened and thus the combined operation of the push-button switch and the selector switch operates to deenergize the holding magnet f when the car arrives at the floor corresponding to the push-button F. The selector circuit of Strohm has identically the same mode of operation as that of the Parker patent. When this selector operates it deenergizes the holding magnet f. This holding magnet, as can be seen by reference to Figure 11 of this brief, opens its contact 67 in the primary circuit, thus deenergizing the "up" magnet H.

Comparing the secondary control circuit of Strohm (Figure 12 of this brief) with the secondary control circuit of Parker for hall-button (Figure 4 of this brief), it will be observed that each of these circuits includes:

- (1) a hall push-button, being the contacts l^2 and j^2 of Parker, and the contacts 19 and 20 of Strohm;
- (2) the contacts of a selector which is to be operated at the time the car arrives at the landing, these being the selector contacts f² and traveling arm 34 of Parker, and the selector contacts 29 and the traveling shoe G on the car of Strohm;
- (3) the coil of a releasing magnet, which coil is to break the primary control circuit. In Parker this coil is the releasing magnet 37. In Strohm this coil is the holding and releasing magnet f.

The Parker patent was therefore not the first to provide a car-switch-started elevator including a primary control circuit with a connection between the secondary control circuit including push-buttons and floor selector contacts which would "interrupt the main driving" circuit at predetermined points in the line of travel of the car (Parker patent, p. 1, lines 51-7).

This is identically the mode of operation of the Strohm patent. As Judge James says, there is no dispute in the evidence as to the Strohm patent or as to how it operates. The Strohm patent is fully described in the record in the testimony of defendants' expert Doble [R. 437-9]. Contrary to the statement in Plaintiff's Brief, the only evidence in the record is that the mechanism in the Strohm patent was placed in practical use [See R. 471-2]. There is no difference between the Strohm patent and the Parker patent in the functions of the elevator. The push-buttons of the Strohm patent can be pressed in any desired order and when started by the car-switch the car will stop in the order of the floors.

"Yes; the car would stop in response to different push-buttons, which could be actuated at random, and the car would stop in the order of the floors."

[Doble - R. 438-9.]

One set of push-buttons is described in the Strohm patent which can be used for stopping the car when the car is traveling upwardly, and a second set of push-buttons is shown in the Strohm patent which can be used for stopping the car when the car is traveling downwardly. The patent shows two sets of push-buttons at the landings and two shoes G, one of which may be retracted when the car is traveling upwardly so that this set of switches

may be used to set up "down" signals and will not be operated by the upwardly moving car. The other may be retracted when the car is moving downwardly and the first shoe extended so that the button used to stop the "up" car will not stop the car when traveling downwardly. Thus defendants' expert Doble testified, without contradiction in the record:—

"There are two hand-controlled automatic stopping cams on the car that are arranged with ropes so that they can be disconnected or put out of actuation from within the car, and one may be used for going up and one may be used for going down.

"Not as specifically shown are there two buttons at each landing, one for stopping a car while traveling in the up direction and another for stopping a car while traveling in the down direction, in the Strohm structure.

"But the fact that there are two buttons there would indicate to any engineer that one was intended for up and the other for down. Otherwise there would be no utility in having them." [R. 483.]

The Strohm patent therefore differs from the Parker patent mainly in the fact that Strohm does not disclose another like set of push-buttons in the car for automatically stopping the car by buttons located within the car. Such duplication of buttons in the secondary control circuits connected therewith would clearly not constitute an invention. Particularly is this true when, as appears hereinafter, there were many patents in the art illustrating electric elevator systems provided with such push-buttons within the car to "relieve the memory of the operator" which could be operated in any desired order for stopping an elevator car automatically. Patents in the record illus-

trating this are Crouan Patent (Def'ts Exhibit X-1); Nistle Patent (Def'ts Exhibit X-14); and Worthen Patent (Def'ts Exhibit X-15).

Plaintiff's Brief, in discussing the Strohm patent, denies but does not prove that Strohm has the very elements which we have herein specifically identified. Plaintiff also states:-

"* * * there is more than one control means for causing the starting of the car; * * *" (p. 163.)

By this plaintiff merely refers to the fact that Strohm included in his primary and secondary control circuits different contacts on the doors of the elevator car and elevator landing which would inhibit the car starting whenever the doors to the car were open. By this structure, of course, just as with any elevator, one can put the carswitch on the "on" position if the elevator car door is open, and the car will not stop. He may then get out of the car and close the door and such operation will start the car. Defendants' elevators likewise cannot be started unless the car door is closed. [See testimony of DeCamp, R. 311, 324.] Defendants' doors or the latch on defendants' car-switch are as much another distinct means of starting the car as the doors of the Strohm patent.

Plaintiff also refers to the fact that Strohm intended that the elevator shown by him in Fig. 1 of his patent could be operated either by an attendant or without an attendant. For this purpose Strohm provided at the terminals of the elevator shaft automatic devices, cooperating with the rope control of Fig. 1 of his patent, which reversed the elevator car automatically. By providing these devices he enabled the elevator operator to get out

of the car and start the car by closing the door. The car would then travel up in the shaft to the top, be automatically reversed, and travel to the bottom, etc., and the passengers could stop the car by pressing the push-buttons at the landing. The fact that Strohm provided these supplementary devices did not prevent the operator remaining in the car, if the traffic was severe, and starting the car manually by the car-switch rather than by the doors. Moreover, in the form of the Strohm patent shown in Fig. 2 thereof, there are no reversing mechanisms at the terminals of the shaft, and those shown in Fig. 1 of the Strohm patent could not be used with the car-switch-controlled elevator of Fig. 2. Thus it is clear that with the elevator of Fig. 2 the attendant must remain in the car and start the car by the carswitch, leaving it only to the passengers to stop the car by the push-buttons.

Nistle Patent (Defendants' Exhibit X-14.)

The patent to Nistle is one example of a prior elevator which was started by the manual operation of a car-starting device within the car and stopped by the actuation of push-buttons located within the car corresponding to the different floors. The Nistle patent states:—

"The object of my invention is to provide a simple and reliable mechanism of the character stated which may be operated by merely pushing a button or equivalent device which indicates and corresponds with the floor at which a passenger may desire to land." [R., Vol. 3, p. 389, lines 14-19.]

The means of the Nistle patent were mechanical in nature. The car-starting device was the control rope 12.

The push-buttons 19 were mechanical push-buttons, each of which operated a lever 17 which was pushed outwardly into the hatchway to engage a mechanical selector cam 20 mounted adjacent the floor level, which that button represented. The push-buttons 19 of the Nistle patent, however, could be pressed in any desired order and the car started by the operator within the car manually moving the control rope 12.

While the means in the Nistle patent are mechanical in nature, they included the mechanical equivalents of each of the devices or mechanisms of the Parker patent. There was in the Nistle patent

- (a) a device within the car to be operated by the elevator operator to start the car;
- (b) push-buttons within the car corresponding to the different floors, which could be operated in any desired order; and
- (c) selector cams in the hatchway which cooperated with the push-button to return the car-starting device, the control rope, to the neutral position.

It is to be noted particularly that the patent states:-

"This relieves the operator of the burden of remembering all of the landings as they are ordinarily announced to him and reduces his labor and responsibility to the setting and resetting of the stop mechanism and the re-starting of the car after each stop." [R., Vol. 3, p. 391, lines 111-117.]

It thus appears that some seventeen years before Mr. Parker had his experience in the Tuller Hotel in Detroit, other patentees had conceived of the desirability of relieving the attendant of an elevator car from the necessity of memorizing the floors at which it was desired to stop and

had provided mechanism which could automatically cause the car to stop at the various levels.

The advantage of these car-buttons is indeed pointed out in the patent with great fullness and particularity.—

"In this manner by the pressing outwardly of any appropriate arm 17 the car may be caused to automatically stop at the desired landing, and it is immaterial how many of the arms are thus actuated at the same time or during a single ascent or descent of the car, since the mechanisms which effect the stopping of the car at the several landings are all independent. For instance, if three passengers desire to stop at the second, fourth, and sixth landings, respectively, all three of the arms 17 corresponding to these landings may be set before starting. The car will automatically stop first at the second landing, after which the mechanism for that landing will be restored to normal position by raising the pawl carrying the numeral '2'. The car will then automatically stop at the fourth landing, * * * after which the car will continue to and automatically stop at the sixth floor." [R., Vol. 3, p. 391, lines 39-62.]

The Nistle patent therefore describes the same functions to be performed in an elevator which are seventeen years later described by Parker. True, the mechanism disclosed by Nistle is related to the type of elevator system in common use at that time. But the fundamental principle of stopping an attendant-controlled elevator by means of push-buttons to be actuated prior to the arrival of the car at the floors is fully disclosed. While plaintiff attempts to distinguish from Nistle in that Nistle's device is mechanical and the Parker patent is electrical, when plaintiff approaches the issue of infringement it abandons any com-

parison of the mechanisms and compares only the functions of defendants' device with the functions of the Parker patent. If mere resemblance in function is a standard of comparison, then Nistle is a complete anticipation of the Parker patent.

Crouan Patent (Defendants' Exhibit X-1).

This patent discloses another example of an hydraulic elevator operated by a mechanical apparatus including a car-starting device and separate push-buttons in the car for stopping the car. These push-buttons are shown in Figs 13 and 15 of Crouan and may be operated in any desired order. The elevator car then may be started by the control rope, and when it arrives at the floors corresponding to any of the push-buttons which have been pressed the elevator car will be stopped. The car does not have to make an individual trip in response to each push-button. The mechanism of this car thus will accomplish all of the objects of the Parker patent in so far as car-buttons are concerned. It will relieve the memory of the operator equally as well as will the means shown in the Parker patent.

This patent therefore fully illustrates that the elevator art had full knowledge of the fact that a car started by a starting device could be stopped by push-buttons if desired, and that these push-buttons would relieve the attendant of the necessity of remembering the floors.

Ongley Patent (Defendants' Exhibit X-6).

The Ongley patent relates to an electrical controlling system. It discloses what is known as the three-button system. That is to say, there is within the elevator car one button which may be pressed to stop the car at the next floor level; one button which may be pressed to start the car in the "up" direction; and a third button which may be pressed to start the car in the "down" direction. Likewise, at each landing there is provided one button for starting the car upwardly; one button for starting the car downwardly; and one button to automatically cause the car to stop at that landing. The language of certain of the claims of the Parker patent inserted by reissue is sufficiently broad to include any elevator which has separate devices outside the car and within the car for stopping the car. The Ongley patent clearly discloses an elevator in which there is a push-button within the car for starting the car and push-buttons at the floor landings and in the car for automatically stopping the car. The push-buttons for stopping the car are separate from the buttons to start the car. The stopping buttons of the Ongley patent are in secondary control circuits containing substantially the same elements as the secondary control circuits of the Parker patent.

The mechanism of the Ongley patent is illustrated in Figure 13 of this brief. This figure shows the secondary control circuit to the selector operated by one of the push-buttons 19 of Ongley which are located at the floor landings. Tracing the circuit from right to left, the circuit leads from the battery minus through line 7 to

the push-button 19. From the push-button 19 the current flows through line 18 to a contact M' which is to be engaged by bridge O on the elevator car when the car arrives at the landing. The bridge connects a contact M' with the second contact M, and thence the circuit continues throught contact N and a switch R (closed by the valve mechanism when the elevator is moving), through line 16' and line 4 to the magnet E⁹, and thence through line 2 to the positive main. The magnet E⁹ is energized by this circuit during engagement of contacts M and M' by the bridge O until the car arrives at the floor. In this manner the magnet E⁹ is energized for a sufficient length of time so as to bring the car to a stop at the landing through the operation of the valve of the hydraulic motor.

Comparing this secondary control circuit with that of the Parker patent (see Figures 3 or 4 of this brief), they will each be found to contain the following elements:

- (a) a push-button, such as the car-buttons d², b², or the hall-buttons l², j², of Parker, and the push-button 19 of Ongley;
- (b) each circuit includes the automatic closing selector gaps, these gaps being the contacts f² in Parker and M and M' in Ongley;
- (c) the selector contacts of these circuits in both cases are engaged by a device moving in unison with the car, the brush 34 in Parker, and the bridge O in Ongley, to in each case complete the circuit;
- (d) each circuit includes a magnet for stopping the car, that is, the neutralizing magnet 37 of Parker and the magnet E⁹ of Ongley;

(e) in each case the floor selector contacts are the means intended to cause the elevator car to be brought to a "level" with the floor.

While it is true that the Ongley patent also discloses additional starting buttons at the floor landings so that a person desiring to use the car may start the car from the landing, this does not detract from the pertinency of this patent as an anticipation. If one does not desire to permit the passengers to start the car as well as to stop the car, all that is necessary to do is to omit these pushbuttons or cover them over so that the passengers cannot press the same. It is well settled in patent law that a mere omission of parts and their intended function does not constitute an invention.

"While the omission of an element in a combination may constitute invention, if the result of the new combination be the same as before; yet if the omission of an element is attended by a corresponding omission of the function performed by that element, there is no invention, if the elements retained perform the same function as before. is well illustrated in the case of Stow v. Chicago, 3 Bann. & Ard. 92, decided in the same circuit." (Richards v. Chase Elevator Co., 159 U. S.

475, 40 L. ed. 225, at 228-9.)

PARKER MADE NO INVENTION.

The record shows conclusively that it was fully known to the electrical engineer prior to the alleged Parker invention that elevator cars could be automatically stopped by push-buttons. There was in use the common apartmenthouse full-automatic elevator in which these same pushbuttons, operating through the same signal circuits, were used for automatically stopping the elevator car. There have been many patents granted, and elevators constructed, in which the elevator was stopped automatically by pushbuttons either within the car or without the car, and in which the elevator car was started by a starting switch within the car. The only type of elevator which had not been stopped by push-buttons automatically was the highspeed attendant-controlled elevators most commonly seen in office buildings. But even these elevators had present the push-buttons and selector circuits which could be used to stop the car without any substantial change in electrical means or apparatus. They were not so used, for several reasons, the principal one being that to stop the car automatically would require the cars to be operated at low speed. The art at that time had not developed devices for automatically stopping cars traveling at high speeds.

It was known to every electrical engineer that these signal systems, in use on every ordinary attendant-controlled elevator, could be used to automatically stop the car. This was so well known that it is admitted both by plaintiff's own experts and by the patentee, Parker, himself. Parker testified that he knew no more of elevators than any ordinary person knows from riding in them [R. 96]. Yet it was apparent to Parker that the push-buttons used on attendant-controlled cars could be made

either to light a light in the car or to stop the car, and that no new special mechanism was required. Parker testified:—

"I was familiar with such a system in which lights were lit in the car before I had the idea on which I later applied for this patent. I knew that a push button would stop a car and I knew that push buttons also lit lights in cars. I had never seen a push button in the car light a light, but push buttons on the floor would light lights in the car." [R. 107.]

No invention can be claimed for Parker in the idea of using push-buttons to automatically stop an elevator equipped with a manual starting switch. Plaintiff's expert Crabbe admitted this was apparent to electrical engineers long prior to Parker's alleged invention [R. 266]. Crabbe could hardly have testified otherwise, because any ordinary electrician would have known that the cars could be stopped by push-buttons and that an appropriate means for stopping the cars was to use the push-buttons that had long been employed both to automatically stop push-button-controlled elevators and to signal office-building elevators. The master says:

"Selectors had been developed which would complete a circuit to stop the car. These were used in the so-called push-button elevators which the patent to Ihlder illustrates." [Master's Report,—R. 563.]

The master's sole basis for finding that there was any invention at all involved in the disclosure of the Parker patent is predicated upon the following statement:—

"That it was contributed by an outsider negatives any theory that it was an obvious step. Otherwise, elevator engineers would have accomplished it long before Parker." [Master's Report,- R. 574.]

Reasoning of this kind is not sound unless there existed prior to Parker's alleged invention a need for an elevator control of the kind devised by Parker. The record in the present case shows that at the date of the Parker patent automatic stopping of elevators could be carried out only upon elevator cars traveling at low speeds, such as 100 to 150 feet per minute. The master ignores the fact that (even if operative at all) the Parker elevator could only be operated at low speeds. Both the master and Judge James found that there was no utility in the Parker system as applied to elevators traveling at low speeds. Clearly, no one had or did want what Parker described in his patent. Neither plaintiff's elevator nor defendants' elevators were successfully built until new means of control for elevators were invented, capable of automatically stopping a high-speed elevator car. If an elevator engineer at the time of the Parker patent had produced the system that Parker had in mind, it could not have found any place in the practical art. This completely negatives the assertion that Parker thought of anything that a skilled elevator engineer could not see.

The record shows that Parker's idea of always compelling an elevator car to stop in response to the wish of a passenger is foolish. Elevator cars intentionally fail to stop and this is necessary to the proper regulation of traffic in office-buildings. When a car becomes loaded to capacity, or when it becomes behind schedule, it must pass waiting passengers who have signaled for it to stop. An

elevator so constructed that it would always be compelled to stop in response to the passenger's pressing of a button could not be operated commercially. Plaintiff's expert Crabbe so testifies:—

"It would be foolish if the car was full of passengers to compel the car to stop at the remaining floors when it could not take on any more passengers, and it is essential to a practical elevator system, even though it has automatic stopping, that the elevator operator be enabled to pass up the hall signals. Parker does not consider that condition in his patent. He makes no mention of it at least." [R. 236.]

Elevators occupy a very substantial space in officebuildings. The higher the speed that elevators may travel, the less the number of cars required to handle the traffic. The progress of the elevator art has been towards higher and higher speeds for elevator cars operating in officebuildings. When the speed of elevator cars began to exceed 600 feet per minute, the difficulties of the elevator operator judging the speed and load of the car to make a stop at a landing had so increased that it became obvious that it would be preferable to stop the cars automatically. If elevator speeds in the future exceed greatly the present speeds, the need for automatic stopping will be even more imperative. The elevator art has directed its attention in the last few years to devising improved means for controlling the deceleration of the elevator car from high speeds to a stop. These problems did not exist prior to Parker, and the solution of these problems is not taught by Parker. The art at the time of the Parker alleged invention could not practically employ automatic stopping of high-speed office-building elevators.

The testimony shows that when elevator engineers had produced means for decelerating a high-speed office-building elevator automatically, they immediately utilized the obvious means then existing in the art for automatically conditioning the decelerating means to operate at the desired floors. They merely substituted a relay for the old flash signal lamps in the old signal circuits for operating the new automatic slow-down and stopping machines.

As will be pointed out hereinafter, defendants' engineers worked a number of years developing a high-speed elevator car which could be automatically slowed down and stopped. Once this development was attained, it is clear from the testimony of defendants' engineer DeCamp that no invention was present in using the ordinary signal circuits, always present on attendant-controlled cars, to operate the newly developed equipment. DeCamp testified:—

"After we had the car developed to a point where it could be automatically slowed down and stopped, it was a comparatively simple matter to add a relay to the operator's flash, which would set up the slow-down impulse." [R. 378.]

Parker had nothing to do with this development. He had no knowledge of how to slow down or stop a high-speed elevator car. To adjudge invention in the Parker patent is to impose a tremendous tribute upon the elevator art, which in fact owes nothing to Parker and which has derived nothing of value from him. The future development of such an important art should not be blocked by the denial of the right to the obvious utilization of the old signal circuits and the old push-button control circuits of this art for stopping a manually-started elevator. To do

so is to find invention in an expedient obvious at the time of its suggestion by Parker, and of no practical utility at that time. Every element of the Parker means existed in the prior elevator art. The elevator car, elevator motor, pole-changing switch, push-buttons, car-switch, selector, and the reset coils, all existed in the prior elevator art. All of these elements were used, each to accomplish the same functions, by the same mode of operation, as they are intended to accomplish in the Parker patent. And all of these elements were combined in the same way to produce the same final result intended in the Parker patent. The Parker patent is therefore for a mere assembly of selected elements, each old in the same art, for accomplishing the same individual functions; the assembly of these elements, each contributing its function, achieving a final result also old in the art. It is well settled that a selection of this kind is not invention.

In Ray v. Bunting Iron Works, 4 Fed. (2d) 214, this Court said:-

"The result of the application of the common skill and experience of a mechanic, which comes from the habitual and intelligent practice of his calling, to the correction of some slight defect in a machine or combination, or to a new arrangement or grouping of its parts, tending to make it more effective for the accomplishment of the object for which it was designed, not involving a substantial discovery, nor constituting an addition to our knowledge of the art, is not within the protection of the patent laws.' Sloan Filter Co. v. Portland Gold Min. Co., 139 F. 23, 71 C. C. A. 460, and cases there cited.

"Nor is there anything new or novel in the combination aside from mere mechanical changes, or changes in machine design. Thus we find the same combination of atomizer and fan in the Mack patent, No. 548,647, issued October 29, 1895, and to some extent in the Klein patent, No. 473,759, issued April 26, 1892. The cases are uniform in holding that there is no invention in merely selecting and fitting together the most desirable parts of different machines in the same art, if each operates the same in the new machine as it did in the old and effects the same result.

"'It is said that appellee's carrier is not anticipated by any single patent; but it is not necessary to show complete anticipation in a single patent. The selection and putting together of the most desirable parts of different machines in the same or kindred art, making a new machine, but in which each part operates in the same way as it operated before and effects the same result, cannot be invention; such combinations are in the nature of things the evolutions of the mechanic's aptitude rather than the creations of the inventor's faculty.' Huebner-Toledo Breweries Co. v. Mathews Gravity Carrier Co., 253 F. 435, 447, 165 C. C. A. 177, 189."

See further:

Keene v. New Idea Spreader Co., 231 Fed. 701, 709, (C. C. A. 6th Cir.);

Duer v. Corbin Cabinet Lock Co., 149 U. S. 216, 223, 37 L. ed. 707, 710;

Sloan Filter Co. v. Portland Gold Mining Co., 139 Fed. 23 (C. C. A. 8th Cir.);

Greist Mfg. Co. v. Parsons, 125 Fed. 116, (C. C. A. 7th Cir.).

That each of the elements of the Parker patent, as well as its function, was old in the art will be apparent from the following:—

(1) That there is nothing novel in the pole-changing switch of the Parker patent or in the motor circuit (Figure 2 of this brief) or in the use of a car-switch closing a primary circuit to the pole-changing switch, is admitted within the Parker patent itself. The patent states (p. 1, lines 49-53):—

"No fundamental change is contemplated in the driving or starting mechanism of the system, but only in the master control switch situated within the car itself."

- (2) The use of a holding and releasing magnet for the primary circuit was old in the electrically controlled circuits of Strohm and of Ihlder. Strohm employed the holding and releasing magnet f. Ihlder employed the holding and releasing magnet D. In addition, the idea of latching the car-switch itself (an entirely useless conception, as found by the Master) and unlatching the same automatically, was the first and oldest method of automatically stopping the car, as is abundantly illustrated in the patents to Crouan and Nistle.
- (3) A "Secondary Control Circuit," which included (a) a manually operable switch or push-button; (b) an automatically operated switch or selector contact, and (c) a magnet to be used in stopping the car, was old and in common use in every attendant-controlled elevator, as shown in the Smalley & Reiners patent; was present in the full-automatic elevator as illustrated by the Ihlder patent, and was old in the Strohm and Ongley patents. The stopping of an elevator car by placing the selector

contacts at such position relative to the floor that the elevator car could be stopped by these contacts opening the car-switch circuit and the motor circuit so that the mechanical brake could be applied, was old in Ihlder and Strohm.

- (4) The use of push-buttons at floor landings to automatically stop an elevator car was old in Ihlder, Strohm and Ongley, and both Strohm and Ongley had push-buttons at the landings, for stopping the car, which were in separate circuits from the starting switch within the car.
- (5) The use of push-buttons within the car for stopping the car automatically was old in Ihlder, Crouan, Nistle, Ongley and Worthen. Nistle in particular in his patent dwelt upon relieving the "memory" of the operator. It is further disclosed in the Worthen patent 1,219,061, of March 13, 1917 (Def'ts Exhibit X-15). This patent provides a single electrical switch in the car for each floor. The starting of the car is controlled entirely from within the car by the operator. As the passengers entered the car at the street-level and announced their floors, the operator could actuate the switches for each floor at random as given by the passengers, and the car would automatically stop in the natural order of the floors. [Doble,—R. 445-448.]

Judge James found:-

"On the record presented, to which I have given careful and painstaking study, I am totally unable to agree with the master; my conclusion, to the contrary, is that when Parker conceived his invention,

the art of elevator control by electrical means, if not already crowded, was certainly well occupied. Considering his elements separately, there was nothing at the time new in the use of push buttons at the floors or in the car which would operate through electrical magnets to connect and disconnect the current feeding the hoisting motor; there was nothing new in a selector means moving synchronously with the elevator car to make and break auxiliary circuits; there was nothing new in a circuit arrangement by which push buttons would be reset after being operated through coil wound magnets. At the time Parker conceived his invention, the type of electrically controlled elevators, such as is common in apartment houses and some business buildings, whereby, by means of push buttons at floor landings and in the car, the elevator can be started and will be stopped automatically, was in common use." [R. 638.]

"It would only serve to prolong this opinion to unnecessary length were I to discuss and analyze the several prior art patents which were introduced in evidence, all referring to systems for the starting and stopping of elevator cars by electrical means, including the use of push buttons at the floors and in the car. All of these are illustrated in the exhibits and in the printed brief filed by the defendants. As to the form and mode of operation of the devices represented, there is no dispute. They are all cumulative evidence to the point that at the time Parker conceived his invention the art in which he was working

was highly developed. Hence, it must be determined that this patentee, insofar as his system exhibits invention, is limited closely to the form and structure described, and that the range of equivalents allowed to him is restricted narrowly to those which substantially embody the things that he describes and specifies." [R. 639.]

It is apparent from the prior art that Parker contributed nothing new in elevator control. He added nothing which would benefit the elevator engineer in any particular. His patent describes only one thing that was not admittedly old, and that is the particular and specific design of the car-switch and its particular and specific arrangement relative to the two holding and releasing magnets 32, 37 and 32′-37′, which nobody uses.

Plaintiff's only claim for the Parker patent is that Parker utilized the old signal system, including the old push-buttons and the old selector, for stopping an attendant-controlled car automatically by automatic release of the pole-changing switch in place of the manual operation by the elevator operator. The mechanism for accomplishing this was merely the usual appliances in the art, if one disregards the particular and specific form of car-switch of the Parker patent. If the Parker patent is construed to cover any use of these old means and appliances, (i. e., old signal circuits,) to stop the car automatically in place of having the elevator operator manually stop the car after the operation of the signal circuit, it is well settled that the Parker patent cannot be sustained as for an invention. No new means or appliances

are thus included. The mere change from hand operation to automatic operation does not constitute patentable invention, where there is no substantial change in the means or appliances required. The case of *General Electric Co. v. Eisler*, 20 Fed. (2d) 33, 36 (C. C. A. 3rd Cir.) illustrates this rule, the court saying:—

"We are here dealing with a glass-blowing machine, an art where the turntable and machine-blown glass articles were common products. Because of these facts the language used by the Supreme Court in Thropp's Sons Co. v. Seiberling, 264 U. S. 320 at page 328, 44 S. Ct. 346, 349, (68 L. Ed. 708), is even more strongly here applicable, viz.:

"'The change from hand to the use of machinery often involves invention. In the making of tires, it has in fact resulted, because of the use of power, in speed of manufacture, and possibly in some greater uniformity of the product. But the record does not show that there has been substantial change in the mechanics or method of making. The steps are the same, and the succession from one to the other are as in the manual art, and the transfer from hand to power was by the usual appliances, and had all been indicated before the state patent."

DEFENDANTS' ELEVATORS. History of Development.

The alleged infringing elevators are a bank of four cars built by the defendant Llewellyn Iron Works and installed in the building of defendant Pacific Finance Corporation in Los Angeles. The work on the development of these elevators started in 1921. [R. 371.] Plaintiff. in developing its Signal Control elevators, devised a means by which the elevator car could be automatically slowed down level with the landing by varying the distance through which the elevator car was slowed down in accordance with the speed and the load in the car. The Llewellyn Iron Works approached the problem in an entirely different way. It devised a means by which the elevator car would be driven always at the same speed in the elevator shaft independent of the load. To do this it made certain discoveries in what is known as the Ward-Leonard drive. The Ward-Leonard drive for elevators is shown in the Ward-Leonard Patent No. 468,100 [Defendants' Exhibit X-7]. Briefly considered, a Ward-Leonard drive for an elevator differs from the ordinary electric drive in the following particulars:

In ordinary electric elevators the control of the elevator motor is accomplished by a direction or pole changing switch which applies the electric current to the armature of the motor in one direction to move the car upward and in another direction to move the car downward and cuts off the power to stop the car. In the Ward-Leonard system the elevator motor is permanently connected with a generator, and the armature circuit from the generator to the motor is not broken in the operation of the elevator

except as a safety factor after the car has come to a stop. Direction switches are employed to regulate the flow of current to the field of the generator. The Ward-Leonard system, as it existed prior to the discoveries made by the Llewellyn Iron Works, would drive an elevator car at widely varying speeds, depending on the load in the car, and it was used only to a limited extent; for example, in mine hoists and steel mills. [R. 508-9.] The experiments conducted in 1921 by the Llewellyn Iron Works led to the addition of a series field winding to the Ward-Leonard system by means of which an elevator car could be caused to travel at constant speed with varying loads in the car.—

"As to whether that testimony was intended to convey the impression that that 1921 work was embodied in the Pacific Finance installation in any way. I would say just in this respect, that on account of using the series field Ward-Leonard generator we were getting at that time as nearly constant speed on the motor as we could with various loads in the car. That was the real disclosure that we found out at that particular time." [R. 394.]

The next step in the development of defendants' elevators was the designing of a new machine for automatically stopping a Ward-Leonard driven elevator. This work commenced in 1924. [R. 371.] This machine operates by inserting in the generator field a series of resistances to bring the car to predetermined decelerated speeds in a step-by-step fashion to slow down the car automatically. [R. 371.] During the operation of the slow-down mechanism, the running circuits and the motor cir-

cuits are not opened. This mode of operation is the opposite of that described in the Parker patent. It enables a high-speed elevator car to be automatically stopped accurately level with the floor landing through the insertion of steps of speed-diminishing resistance in the generator field.—

"The purpose of this experiment was to automatically slow-down and stop a high-speed elevator car, that is, a car running say 600 feet per minute, in steps of diminishing resistance to bring the car to a level with the landing." [R. 374.]

This automatic slow-down and stopping machine is dependent for its operation on the improvements previously discovered in the Ward-Leonard system, including the use of the new series field.—

"The slow-down and stopping mechanism employed in our type of installation in the Pacific Finance Building would not function properly without the series field." [R. 506.]

The development of this series field and its purpose are described in the testimony as follows:-

"Explaining what the series field means and how it accomplishes that particular purpose, I would say without the series field on the generator a Ward-Leonard system would not result in a constant speed at all on the creeping speeds. The fact is, with full speed on the elevator, the elevator might not even move, but adding the series field on the generator. this series field being arranged so that the current from the armature of the generator passes through the series field, and which same current also passes

through the armature of the elevator driving motor, results in an automatic strengthening of the field as the load is increased on the elevator driving motor; that is, if the load on the driving motor is heavy the current through the series field must be correspondingly heavy, and the heavy current through this series field results in strengthening the magnetism of the generator and assists in building up a higher voltage than otherwise would be obtained, and this higher voltage tends to keep the speed of the elevator car practically constant. It is an automatic device that depends upon the current which is drawn by the elevator motor to compensate for loads which are placed on the elevator car." [R. 506.]

The first experiments with the automatic slow down and stopping machine were conducted by the Llewellyn Iron Works in the Pershing Square Building in Los Angeles. In April, 1925, this work was transferred to the Petroleum Securities (Pan-Gas) Building. The automatic slow down and stopping machine was installed there for use with the No. 4 car in the bank of elevators. Pushbuttons were provided in that car and the automatic slow down and stopping machine was connected to the same hall signal system that was used for the other cars.—

"The traffic became too heavy in the Pershing Square Building to do any further experimental work, so early in 1925 the equipment was all moved to the Petroleum Securities Building, on elevator No. 4, where the same equipment was tried out in connection with a different size of motor, and the same results were secured."

[R. 372.]

The drawings for this installation are dated April, 1925, and are in evidence as Defendants Exhibits S-1 to S-4

[R. 376.] The installation was completed and the car turned over for regular passenger service as early as August 4, 1925.—

"I fix the date as to when the No. 4 car in the Petroleum Securities Building was turned over for regular passenger use, equipped with automatic stopping, by the completion of the test which I made on that particular car.

"I believe I have the test sheets here.

"Witness produced them.

"These are the complete test sheets and reports which are dated August 4, 1925, signed by myself, the report being made by myself at that particular time. It refers to the Pan American No. 4 car.

"That is the same car sometimes referred to as the Pan Gas Building and the Petroleum Securities Building." [R. 378-9.]

This elevator was still in use at the time of the trial of this case. It was examined by the special master. There was no difference between this car No. 4 and the other cars in the same bank, except the addition of the automatic slow down and stopping machine which was operated by an additional contact added to one of the relays of the signal system.

The equipment embodied in the No. 4 car in the Petroleum Securities Building was identical with that subsequently employed in the alleged infringing elevators installed in the Pacific Finance Building. The only difference is that the signal system employed in the Petroleum Securities Building was purchased from the Elevator Supplies Company, whereas the signal system employed in the Pacific Finance Building was purchased from the Randall Control & Hydrometric Corporation.—

"Comparing the installation just referred to to the Pacific Finance equipment, the installation at the Petroleum Securities Building is substantially the same as that installed later at the Pacific Finance Building, with the exception of the signal system, which in that building is an Elevator Supplies signal system, and in the Pacific Finance Building is a Randall system."

[R. 372.]

Following the completion of the No. 4 elevator in the Pan-Gas Building, defendants contracted to install this type of control in the bank of four elevators for the new Pacific Finance Building. In October, 1925, the work of installing the Pacific Finance Building elevators was commenced [R. 278] and the first car was actually complete and turned over for passenger service on March 4, 1926. [R. 278.] The particular elevators which are charged to infringe the Parker re-issue patent had been constructed and were being installed before plaintiff purchased the original Parker patent. One of these elevators was in actual operation some nineteen days before the Parker re-issue patent was granted on March 23, 1926.

The history of the development of defendants' elevators clearly demonstrates that defendants' system is not indebted in any way to any invention conceived by Parker; that, on the contrary, it was an independent development along entirely different lines and principles. The great advance over the prior art embodied in defendants' elevators is in the development of the Ward-Leonard control and of the automatic slow down and stopping machine. No invention was involved in the use of push-buttons to control these. Once the discoveries had been made of the Ward-Leonard control and the automatic slow down and stopping machine had been developed, any elevator engineer knew, from common experience with automatic elevators of the apartment-house type, that push-buttons could be used to control the operation of this mechanism either from within the car or from the floor landings.

Plaintiff in its brief states that its Signal Control elevators were described in the Scientific American of October, 1925, and that defendants' chief engineer Baruch had seen the same in New York City and that he described them to DeCamp in 1925, "before the latter designed the defendants' installation." (Pl'ffs. Br., p. 37.) We have already referred to the record proof that defendants commenced the design of their automatic-stopping elevators early in 1924. Plaintiff refers to DeCamp's statement as to when Baruch instructed him to design the Pacific Finance elevators. But by this time identically the same elevator had been installed by defendants in the Petroleum Securities Building. There is no basis for the assertion that Baruch ever saw one of plaintiff's "Signal Control" elevators before the design of the elevator for the Petroleum Securities Building.

Judge James said:-

"Wonderful ingenuity is displayed in the highly complicated slow-down and floor selector machines used by the defendants." [R. 643.]

Plaintiff in its brief says:-

"whereas there was little new in any of these mechanisms over that of previous Otis elevator practice." (p. 43.)

This statement of plaintiff is absolutely contrary to the record. Plaintiff cites no record reference in its support of the statement. Plaintiff's Signal Control elevators employ a totally different driving and slow-down means. It used a system called "Multi-Voltage" and not a Ward-Leonard Control. [R. 208.]

Description of Defendants' Elevators.

"An understanding of the complicated apparatus used in the defendants' installation requires concentrated effort of many hours duration and involves the examination of a multitude of schedules and drawings. It is impossible to follow in detail a description of defendants' elevator system without resort to the drawings and schedules,—hence a closely particularized description cannot be set forth in any opinion unless the formal data referred to is made a part of it.

"The witness DeCamp, an expert engineer, employed by the defendant, Llewellyn Iron Works, furnished the testimony from which the master made his conclusions with respect to the form and mode of operation of the alleged infringing installation."

[Judge James,- R. 634.]

The elevators in the Pacific Finance Building consist of four cars operated in a bank with an approximate running speed of 600 feet per minute. The cars are driven by motors located in the pent-house above the elevator shafts. One of these motors is shown in the photograph, Exhibit I-1 [R., Vol. 3, p. 179], and is described at R., Vol. 1, pp. 285-6.

There is a separate automatic slow down and stopping machine for each car. These are suspended from the

pent-house ceiling. One of these automatic slow down and stopping machines is shown in the photograph, Exhibit I-2 [R., Vol. 3, p. 180], and is described at R., pp. 286-90.

This machine has a rope drum 1, which carries a wire rope attached to the elevator car so that the machine is moved in exact synchronism with the movement of the elevator car. A primary slow down drum 2 is geared to the rope drum so that the rotation of the rope drum produces a corresponding rotation of the primary slow down drum. A secondary slow down drum 3 is mounted to rotate with the primary slow down drum and rope drum. A leveling drum 4 is connected directly to and constitutes a part of the rope drum 1.

Cams 3C are carried by the secondary slow down drum to operate a plurality of switches 3O and 3E, there being six 3O switches and a corresponding number of 3E switches arranged radially around the drum. The secondary slow down drum 3 is divided into two parts, providing one set of cams and switches for the odd floors (those bearing odd numbers) and another set of cams and switches for the even floors (those bearing even numbers). The rotation of the secondary slow down drum causes the cams 3C to actuate the switches 3O and 3E to intiate steps of deceleration to bring the car to the floors at a comparatively slow speed.

A number of cams 4C are carried by the leveling drum 4 to operate leveling switches 4MS. The circuits from the 4MS leveling switches control the motion of the car after it has been slowed down through the operation of the secondary slow down drum and cause the car to stop level with the floor.

A plurality of cams, one for each floor, are provided on the primary slow down drum 2 to operate a number of switches 2U and 2D. The cams for the first and thirteenth floor appear in the photograph and are numbered accordingly. The primary slow down drum is used to transmit signals from a Randall signal machine to the secondary slow down drum and to operate as a floor selector in response to the car push-buttons

A Randall signal selector for each car is located in the pent-house. This is a well-known type of floor selector in which a carriage is driven from the elevator car to close contacts corresponding to the different floors. The photograph, Exhibit I-3, shows a plan view of this selector. [R., Vol. 3, p. 181.] Photograph Exhibit I-4. shows a side-view of the same machine [R., Vol. 3, p. 182]. The machine is described in detail at R., Vol. 1, pp. 291-2. The circuits from the push-buttons at the floor landings lead to all four of these Randall machines. The Randall machine for the first car to approach the floor at which a push-button has been pressed completes a circuit to the primary slow down drum of the automatic slow down and stopping machine for that car and resets the push-button so that no subsequent car will stop at that floor on that signal.

The circuits from the push-buttons at the floor landings to the Randall signal machines are controlled by a series of relays mounted on a panel in the pent-house. This panel is called the Hall Signal Panel and is illustrated in the photograph, Exhibit I-5 [R., Vol. 3, p. 183]. A relay is a switch which is operated by the flow of current through a coil to open or close one or more contacts. Physical

Exhibit "J" is a specimen of one of the relays used on the hall signal panel in defendants' elevators [R. 293]. The contacts on these relays may be normally closed, to be opened by the flow of current through the coil; or may be normally open, to be closed by the flow of current through the coil. The relays on the hall signal panel are numbered 1 to 67 on the photograph, Exhibit I-5. The functions of the individual relays are explained at R., pp 293-6.

The circuits from the car-switch and car-buttons to the driving mechanism and the automatic slow down and stopping machine are controlled by a number of relays mounted on a main control panel in the pent-house. There is a separate main control panel for each car. One of these main control panels is shown in the photograph, Exhibit I-6. Physical Exhibit "K" is a specimen of one of the relays used on this panel [R. 303]. The relays on the main control panel are numbered 1 to 51 on the photograph, Exhibit I-6. The functions of the different relays are described at R., pp. 298-306.

A Ward-Leonard generator set is mounted in the pent-house for driving each elevator motor. One of these Ward-Leonard generator sets is shown in the photograph, Exhibit I-7 [R., Vol. 3, p. 185], and is described at R., p. 296. As pictured in the photograph, there are three electrical structures mounted on a common shaft. The center structure is an electric motor which rotates the armature of the generator. The generator is shown in the forepart of the photograph, and the third electrical structure (at the rear) is an exciter which is used to produce the controlling current for the generator field and various other parts of the apparatus.

Each elevator car is provided with a car-panel positioned in front of the car operator. The exterior of one of these panels is shown in the photograph, Exhibit I-8 [R., Vol. 3, p. 186]. The interior is shown in the photograph, Exhibit I-9 [R., Vol. 3, p. 187]. The car panel is provided with a car-switch having a latch 5C to be manipulated by the operator to initiate the starting of the car. A set of push-buttons 12CS are provided, one for each floor (except the basement and the top floor). We need not refer to the other switches and levers appearing on the car panel, which serve various auxiliary purposes. The construction of the car panel and its mechanism is fully described at R., pp. 307-10.

The circuits employed in the defendants' elevators are shown in the drawings, Defendants' Exhibits N, and O1 to O4, and P-1 and P-2. The mode of operation of the elevators cannot be followed unless these circuits are understood. A given circuit functions to energize a relay to cause a contact of that relay to open or close the next circuit. The only practical way of studying the system is to trace the operation from circuit to circuit. We have attempted to simplify the understanding of defendants' system by the diagrams appended to this brief. These diagrams are intended to illustrate the circuits separately, to avoid the difficulty of using a drawing in which the particular circuit to be studied is entangled with a maze of other circuits. The diagrams appended to this brief are correct reproductions from the exhibits, employing the identical symbols appearing thereon. Where the coil of a relay is included in the circuit, the number of the relay appears over the zig-zag line representing the coil in the diagram. The number of the relay is accompanied by

symbols showing the number of contacts actuated by that relay. If the contact is normally open, the symbol for the contact appears above the coil in the circuit diagram. If the contact is normally closed, the symbol for the contact appears below the coil in the circuit diagram. For example, if the coil for relay 46 appeared in a circuit diagram, above this coil will be the number "46" within a circle. Relay 46 has contacts UO1, UO2 and UOA UO1 and UO2 are normally open contacts. A normally open contact is a contact that is closed by the flow of current through the coil of the relay. The symbols UO! and UO2 would appear above the coil in the diagram. Contact UOA is normally closed, to be opened by the flow of current through the coil of the relay. The symbol for contact UOA would appear below the coil in the circuit diagram. The contact actuated by a relay would appear in a different circuit from the circuit that included the coil of the relay. Where the contact, and not the coil, appears in any circuit diagram, only the symbol for the contact appears.

Running Circuits (Figure 14 of this brief).-

The circuits utilized for starting the car and subsequently continuing the movement of the car are shown in Figure 14 of this brief. These circuits are identical with the same circuits which appear on Exhibit O-3 and O-4. They are described in the record at pp. 324-36. To start the car upwardly, the car-attendant moves the car-switch to close the "up" contacts. This closes the first or upper circuit on Figure 14, which may be traced from the main LL1, through line DU, through the car-switch, line 1U, through the coil of relay 46 having contacts UO1-UO2-UOA, through coil of relay 45, through certain auxiliary

devices which are omitted, through line O1, to the main LL2. The passing of the current through the coil of relay 46 closes contacts UO1 and UO2 and opens contact UOA.

The closing of contact UO1 closes the second circuit on Figure 14, which may be traced from the main LL1, through the normally closed contact LVA of relay 44, through contact UO1 which is now closed, through a limit switch, to the coil of relay 27 having contacts 1-3-3A, through the coil of relay 49 having contacts UT1-UT2-UTA, through the coil of relay 29 having contacts 1B-2B-2BA, through certain omitted auxiliary devices, to the negative main LL2. The function of this second circuit is to operate relays 27, 49 and 29. Relay 29 operates to close certain circuits to withdraw the brakeshoes from the elevator motor. The brake is of the usual mechanical type including springs which apply the brakeshoes to the electric magnet, which when energized withdraws the brake-shoes from the elevator motor. The brake is always applied in defendants' system except when electric current is applied to relay 29.

One effect of relay 49 is to close the contact UT1, which it will be observed forms a shunt in the first circuit on Figure 14 of this brief, setting up a holding circuit around the car-switch. This permits the car-switch to be returned to the "off" position without stopping the car. This is accomplished without the necessity of maintaining the car-switch contacts closed, and requires no special construction of car-switch. A push-button could be substituted for the car-switch with equal effect.

The passage of current through the coil of relay 27 closes contacts 1 and 3 and opens contact 3A. Closing

contacts 1 and 3 closes the generator field circuit (shown in Figure 15). Contacts SD1, LV and 4MS in the third or lowermost circuit on Figure 14, which includes "Cam on Leveling Drum", are at this time open. The operation of this circuit will be described later.

Generator Field Accelerating Circuit (Figure 15 of this brief).-

The circuit illustrated in this Figure is a reproduction of a circuit appearing in Exhibits N and O-3 and is described in the record, at pp. 331-336. The circuit is traced as follows: Starting with main LL1, through a set of accelerating resistances, through normally closed contacts STA and SDA, through governor-regulated resistance controlled by a contact GFX, through contact 1 of relay 27, through normally closed contact LFA, through generator shunt field, through normally closed contact LFB, through normally closed contact 53, through contact 3 of relay 27, through a limit switch, to the main LL2. This circuit energizes the generator shunt field in the direction to pass current through the motor circuit (Figure 16) to move the car upwardly.

Motor Circuit (Figure 16 of this brief) .-

The circuit shown in this Figure appears on Exhibits N and O-3 and is described in the record at p. 327. The circuit may be traced from the generator through line A1 to the motor, through line A3, through contact M of relay 48, through line A2, through the series field of the generator, and back to the generator. Relay 48 is energized by a contact of relay 45. Relay 45 appears in the first circuit on Figure 14.

The circuit shown on this Figure 16 is a loop circuit, and whenever current is supplied to the shunt field of the generator (as shown in Figure 15) the generator sends current through this loop circuit to the motor.

Car-Button Selector Circuit (Figure 17 of this brief) .-

This Figure shows the circuit set up by pressing a car-button; for example, the button for the seventh floor. The same circuit appears in Exhibit O-2 and is described in the record, at pp. 337-43. The circuit is traced on Figure 17 from the X main through a car non-stop button, through line C1 to #7 car-button, through line C7 to the seventh floor 2U switch on the primary slow down drum. This switch remains open until the car reaches about twelve feet from the floor landing. The switch is then closed by the corresponding cam on the primary slow down drum. This completes the circuit through line YOU to the coil of relay #5 having contact HO, through contact UO2 of relay #46, through normally closed contacts EA and OA to the Y main. There are two sets of 2U switches on the primary slow down These appear on Exhibit O-2. One of these drum. sets of switches 30 is for odd-numbered floors and connect with the line YOU which leads through relay #5 having contact HO; the other set, 3E, is for even-numbered floors and connect with the line YEU leading to relay #4 having contact HE. Both relays #4 and #5 have two coils, one for operating in the up direction and one for operating in the down direction. Relay #5 connects circuits to the 30 set of switches on the secondary slow down drum, and relay #4 connects circuits to the 3E set of switches. This odd and even arrangement is necessary to avoid the cams for adjacent floors on the secondary slow down drum interfering one with the other because the distance through which the car is slowed down is greater than the distance between the adjacent floors.

When the first circuit appearing in Figure 17 is completed by the car closing the seventh floor 2U switch, the flow of current through the coil of relay #5 closes the HO contact appearing in the second circuit on this Figure. The latter circuit is traced from the X main through contact RCA, through the coil of relay #2 having contacts O1-O2-O3-OA, through contact HO to the Y main. The passing of current through the coil of relay #2 closes contacts O1-O2-O3 and opens contact OA. The closing of the O1 contact completes a self-holding circuit for the relay #2 as shown in the second circuit on Figure 17. The closing of contact O2 completes a circuit shown on Figure 18 of this brief. The closing of contact O3 completes the circuits shown on Figure 19 of this brief. The opening of contact OA interrupts the first circuit shown in Figure 17. That circuit thereupon ceases to exist and therefore performs no function during the time the car is being slowed down and stopped.

Slow Down and Stopping Machine Relay Circuits (Figure 18 of this brief).—

The circuit completed by the closing of contact O2 of relay #2 is the first circuit illustrated in this Figure. This circuit will be found on Exhibit O-3 and is described in the record, at p. 340. This circuit has two branches, one employed for energizing the coil of relay #31 and the other employed for energizing the coil of relay #21. The first branch is traced from the LL1 main through

contact MR, through the O2 contact which has now been closed by the second circuit on Figure 17, through the coil of relay #31 having contacts SD1-SD2-SDA, through a resistance controlled by contact 2A1, to the main LL2. The second branch is from the main LL1 through contact MR, through contact O2, through the coil of relay #21 having contact STA, through the coil of relay #20, to the main LL2. The passing of current through relay #31 opens contact SDA in the circuit described in Figure 20 of this brief to permit the insertion of the decelerating resistances in the generator field circuit which slow the car down to the speed at which it may be controlled from the leveling drum. The passing of current through the coil of relay #21 opens contact STA (also in the circuit shown in Figure 20 of this brief) to insert the first small amount of this decelerating resistance in the generator field circuit. Contacts SD1 and SD2 of relay #31 are closed in the circuit appearing at the bottom of Figure 18. This and the remaining circuits appearing on Figure 18 will be described later.

Slow Down and Stopping Machine Cam Circuits (Figure 19 of this brief).-

The circuit completed by the closing of contact O3 of relay #2 closes the three parallel circuits shown on Figure 19 of this brief. These circuits are reproduced from Exhibit O-4 and are described in the record, at pp. 341-9. They may be traced as follows: 1st, the circuit from the Y main through contact O3 to the coil of relay #12 having contacts 4O1-4O2 to the cam-operated switch OD4 on the secondary slow down drum, through contact UT2 to the X main. 2nd, the circuit from the Y main through contact O3, through relay #13 having contacts 3O1-3O2,

to the cam-operated switch OD3 on the secondary slow down drum, through the contact UT2 to the X main. And, 3rd, from the Y main through contact O3, through the coil of relay #14 having contacts 2O1-2O2 to cam-operated switch OD2 on the secondary slow down drum, to the X main. The cam-operated switches on the secondary slow down drum OD2-OD3-OD4 are the 3-O switches shown in the photograph, Exhibit I-2. These switches have all been closed by the cams on the secondary slow down drum at the time contact O3 is closed to complete the circuits shown in Figure 19.

The passing of current through relays #12, #13 and #14 closes contacts 4O2-3O2-2O2 in the circuits shown on Figure 18. These circuits are traced as follows: 1st, from X main through contact 402, through the coil of relay #9 having contacts 4A1 and 4A2, to the Y main. 2nd, from the X main through contact 302 to the coil of relay #10 having contacts 3A1-3A2-3A3, to the Y main. 3rd, from the X main through contact 202 to the coil of relay #11 having contacts 2A1-2A2-2A2 to the Y main. The passing of current through the coils of relays #9, #10 and #11 in the circuits shown on Figure 18 closes contacts 4A1-3A1-2A1. The passing of current through the coils of relays #12, #13 and #14 in the circuits shown on Figure 19 closes the contacts 401-301-201. Contacts 4A1-3A1-2A1 and 4O1-3O1-2O1 are in the generator field decelerating circuit shown in Figure 20 cf this brief.

Generator Field Decelerating Circuit (Figure 20 of this brief).—

The circuit described in this Figure is the circuit employed in the generator field during the slow down opera-

tion. It appears on Exhibits N and O-3 and is described

in the record, at pp. 343-7. This circuit is formed from the generator field circuit (Figure 15 of this brief) by opening of contacts STA and SDA and the simultaneous closing of contacts 401-301-201 and 4A1-3A1-2A1. The circuit is then traced as follows: From the LL1 main through auxiliary devices now inoperative (represented by the blank in the circuit), through the first step of decelerating resistance, through contact 401, through contact 301, through contact 201, through the resistances controlled by contact GFX, through contact #1, through contact LFA to the generator shunt field, then through contact LFB, through contact #3, through the limit switch to the main LL2. Contacts 401, 301 and 201 were closed when current was passed through the coils of relays #12, #13 and #14 by the circuits shown in Figure 19 of this brief. At that time the car was approximately twelve feet from the seventh floor landing. The continued movement of the car to within approximately nine feet of the floor causes the switch OD4 to pass off the cam on the secondary slow down drum, thereby opening the switch and interrupting the flow of current through the coil of relay #12. This permits contact 401 to open in the circuit shown in Figure 20, thereby inserting in the generator field the portion of the resistance up to contact 4A1. The interruption of the flow of current through the coil of relay #12 also opens contact 4O2 to open the circuit to the coil of relay #9 (shown in Figure 18), thereby opening contact 4A1 in the generator field circuit shown in Figure 20. Contact 4A1 is a slow-acting contact and inserts the remaining decelerating resistance up to contact 301 when the car is about seven-and-a-half

feet from the seventh floor landing. Continued movement of the car to approximately six feet from the seventh floor causes switch OD3 (shown on Figure 19) to leave the cam on the secondary slow down drum, opening the switch and interrupting the flow of current through the coil of relay #13. This opens contact 301 in the generator field circuit shown on Figure 20 and inserts the next portion of the decelerating resistance up to contact 3A1. The interruption of the flow of current through relay #13 also opens contact 302 in the circuit shown on Figure 18, interrupting the flow of current through the coil of relay #10. This opens the contact 3A1 in the generator field circuit shown in Figure 20. Contact 3A1 is another slowacting relay and inserts in the generator field circuit the additional portion of resistance up to contact 201 at the time the car is approximately four-and-a-half feet from the seventh floor landing. When the car has reached approximately three feet from the seventh floor landing, switch OD2 (shown in Figure 19) passes off the cam on the secondary slow down drum, opening the switch and interrupting the flow of current through the coil of relay #14. This opens contact 201 in the generator field circuit shown in Figure 20 and inserts a further portion of the decelerating resistance up to contact 2A1. The interruption of the flow of current through the coil of relay #14 also opens contact 202 in the circuit shown in Figure 18 and interrupts the flow of current through the coil of relay #11. This opens contact 2A1 in the generator field circuit shown in Figure 20. Contact 2A1 is a third slowacting contact and opens to insert the rest of the decelerating resistance at the time the car arrives about a footand-a-half from the seventh floor landing. At this point

the speed of the car has been reduced from approximately six hundred feet to fifty feet per minute. The car has been slowed down step-by-step as the seven different portions of decelerating resistance have been progressively inserted in the generator field circuit as just described.

The last two steps in slowing down the elevator car to bring it to a stop at the landing are accomplished by the opening of the 4MS cam-operated switches on the leveling drum. The leveling drum shown in the photograph, Exhibit I-2, has two cam-operated switches 4MS, one on the bar 4MX and one on the bar 4MY. By the time the car has been decelerated to a speed of 50 feet per minute, the two switches 4MS have been brought into contact with the drum and closed by the 7th floor cam on the drum.

The cam-operated switch on bar 4MY reaches the end of the cam when the elevator car is from 8 to 12 inches from the 7th floor landing [R. 346]. This opens a circuit (not shown in the drawings of this brief) which has been energizing relay #23. This relay #23 when deenergized closes a circuit (not shown in the drawings of this brief), to relays #32 and #33 having contacts LF1-LFA and LF4-LFB, respectively. These two circuits appear on Exhibit O-4 and are described in the record, pp. 346-7. The energizing of relays #32 and #33 opens contacts LFA and LFB and simultaneously closes contacts LF1 and LF4 in the generator field decelerating circuit (Figure 20 of this brief). The simultaneous opening of contacts LFA and LFB and closing of contacts LF1 and LF4 substitutes the Damping Field for the Generator Shunt Field. The damping field is a

low-resistance few-turn field for slow-speed operation. The substitution of this damping field for the generator shunt field further reduces the speed of the car to 25 feet per minute [R. 347]. This is the final step of decelerating the car by the generator field.

The deenergizing of relays #10 and #11 (shown in Figure 18 of this brief) during the decelerating operation has energized the bottom circuit on Figure 18. When relay #10 is deenergized it closes its contact 3A3 in this circuit. When relay #11 is deenergized it closes its contact 2A2. This establishes the circuit which may be traced as follows: From the X main through contact SD1, through coil of relay #44 having contacts LV-LVA, through contact 2A2, through contact 3A3, through contact CR2, through contact SD2 to the Y main. This circuit energizes the coil of relay #44 which closes its contact LV and simultaneously opens its contact LVA. These contacts are in the running circuits (Figure 14 of this brief). The opening of contact LVA opens the circuit appearing on Figure 14 of this brief through the UO1 contact to relays #27, #49 and #29. The closing of contact LV establishes simultaneously a branch circuit to said relays #27, #49 and #29. This circuit may be traced on Figure 14 of this brief as follows: From main LL1 through contact SD1, through contact LV, through the cam-operated switch 4MS on the leveling drum, through relays #27, #49 and #29, to the main LL2. Contact SD1 was closed by energizing the relay #31 appearing in the top circuit on Figure 18.

The elevator car proceeds until it arrives about 3/4ths of of an inch from the 7th floor landing. The cam-operated

switch 4MS on bar 4MX, shown in the photograph, Exhibit I-2, reaches the end of the leveling cam. This switch then opens and interrupts the flow of current to relays #27, #49 and #29. The interrupting of current to relay #27 causes its contacts #1 and #3 to open, interrupting the flow of current through the damping field, Figure 20 of this brief. The interrupting of current to relay #29 deenergizes the circuits which have been energizing the magnet of the brake and the mechanical spring brings the brake-shoes into engagement with the elevator motor, holding the car stopped. The interruption of flow of current to relay #49 opens its contact UT1 appearing in the top circuit on Figure 14. This interrupts the flow of current through relays #46 and #45. The interruption of current to relay #45 interrupts the current in a circuit leading to relay #48, whose contact M appears in the motor circuit (Figure 16 of this brief). This relay #48, however, is a slow-acting relay and does not open for two or three seconds to insure that the motor circuit will not be interrupted until the car has been held stationary at the landing.-

"Main line contactor 48, as I understand it, operated by contactor 15 on brake release 29, does not open to affect contactor 48 until after the car has come to a complete stop. Witness DeCamp, in that connection, testified:

"'The generator armature is connected directly to the armature of the elevator hoisting motor by means of a main line contactor, which is closed while the elevator is in motion, and is kept closed for two or three seconds after the elevator has come to a complete stop. In other words, the main connections between the Ward-Leonard generator and the main elevator hoisting motors are never disconnected until it is absolutely sure that the elevator has come to a complete stop, and only then for two or three seconds afterwards." [R. 641-2– Underscoring, Judge James.]

The elevator car is now stopped at the 7th floor landing and all of the circuits are restored to their original position. We shall not describe the various relays used in operating the elevator door and to restore the signal and slow-down circuits of the elevator to their original position. No one asserts these compare with anything shown in the Parker patent.

Hall-Button Selector Circuit (Randall Machine). (Figure 21 of this brief).—

Figure 21 shows the selector circuits employed in defendants' system for stopping the car when a hall-button has been pressed. These circuits are all part of the ordinary Randall Signal Machine purchased by defendants from the Randall Control & Hydrometric Corporation. The circuits shown are those employed when the 7th floor down hall-button is pressed. They are described in the record, at pp. 361-6. The pressing of the 7th floor down button immediately completes the top circuit on Figure 21. This circuit is reproduced from Exhibit P-1. The circuit may be traced as follows: From the main L1 through coil of relay #53, through the 7th floor down hall-button H7D, through coil of relay #33 having contact HR7D, to main L2. Relay #33 has two coils. The second coil is employed in a self-holding circuit for relay #33. This selfholding circuit is closed by contact HR7D of relay #33. It may be traced as follows: From main L1 through

contact HR7D, through contact R7D, through coil of relay #33, to main L2. The hall push-button then may be released and the top circuit opened.

Relay #33 has a second contact, also labeled "HR7D". in a circuit leading to the Randall Signal Machine. This circuit is the third circuit appearing on Figure 21 and is reproduced from Exhibit P-2. We have added the characters "C" on the contact, "B" on the carriage, and "S" on the strip of the selector, which characters do not appear in the drawings, Exhibit P-2. Four similar circuits are simultaneously closed to the respective four Randall Signal Machines of the four cars, but we have reproduced only the circuit to one machine which may be considered as connected to the first down car to approach the 7th floor landing. The circuit to the Randall Signal Machine may be traced as follows: From the main I.1 through contact HR7D to the 7th floor contact C of the selector. This contact is engaged by the carriage B in the selector machine when the car arrives at about 1½ floors from the landing. The circuit is then completed from the contact C to bridge B, thence to strip S, to coil of relay #54 having contacts PL1-PL3, through contact 58 to main L2. Relay #54 is thus energized and closes its two contacts PL1 and PL3. Contact PL1 of relay #54 closes a circuit (not shown in the Figures of this brief) to energize a light in the elevator car to advise the operator that the car will stop at the 7th floor unless he desires to pass that floor by pressing the non-stop button. Contact PL3 on relay #54 connects the Randall selector with the automatic slow-down and stopping machine by the circuit shown in Figure 22.

Circuit for Connecting Randall Machine and Slow Down Machine (Figure 22 of this brief).-

This Figure shows the circuit closed by contact PL3 of relay #54 to connect the Randall machine with the automatic slow-down and stopping machine. This circuit appears on Exhibit O-2 and is described in the record, at p. 366. As will appear on Exhibit O-2, contact PL3 connects with each and every 2U and 2D cam-operated switch on the primary drum of the slow down machine. We have reproduced only one of such circuits. The circuit may be traced from the X main through contact PL3, through contact UOA, through the 2D2 cam-operated switch on the primary slow down drum, through relay #5, through contacts DO2, EA and OA, to the Y main. This circuit is closed by the cam on the primary slow down drum when the car is 12 feet from the 7th floor landing. It energizes relay #5. This is the relay that was energized when the car-button was pressed (as described in connection with the first circuit appearing on Figure 17 of this brief). The subsequent operations of decelerating and stopping the car then take place by the same circuits that have been described in connection with Figures 17, 18, 19 and 20 of this brief.

NON-INFRINGEMENT.

It is elementary that to infringe a patent, a machine must not only perform the same function and accomplish the same result as the patented machine, but it must also perform that function or accomplish that result by identical or substantially identical means, and the mode of operation of these means must be substantially the same as the mode of operation of the means described in the patent. (48 *Corpus Juris*, 302.)

"The respective results of a machine or manufacture covered by the claim of a patent, and of a machine or manufacture alleged to infringe that claim, do not furnish a criterion by which to decide the question of infringement. Those results may be identical, while the mode of operation and the means by which the result is secured are different. Any person may accomplish the result performed by a patented thing without infringing the patent, if he uses means substantially different from those of the patent. To hold the contrary of this rule would be to retard, and not to promote the progress of the useful arts." (Walker on Patents, 6th Ed., p. 490.)

The means employed in defendants' elevators are substantially and entirely different from those of the patent. The means in defendants' elevators operate in a different way from the means described in the patent. These facts are readily established by a comparison of defendants' elevators with the specification and drawings of the Parker patent. Judge James finds:—

"Before referring particularly to the exceedingly complicated mechanism of the defendants' elevators, which are claimed to embody infringement of the Parker patent, it may be stated that I am unable to conclude that the Parker patent system could by any reasonable modification be transplanted into the elevator control system of the defendants; any attempt so to do would result in the essential means described by Parker being utterly changed, obliterated and lost so that no substantial identity could be

ascribed to the resulting combination." [R. 640.] This finding is in accord with the facts and applies the correct rule of law.—

"Yet every equivalent, whether asserted in respect of a small or great invention, must respond to the rule enunciated in Morley v. Lancaster, 129 U. S. 263, 9 S. Ct. 299, 32 L. Ed. 715, viz., that where a combination of a plurality of mechanisms constitutes the invention, each mechanism is to be individually considered to determine equivalency, though the result of the plural operations working conjunctively is identical in the patented and accused devices."

(Diamond Match Co. v. Sun Match Corporation, 16 Fed. (2d) 1-C. C. A. 2nd Cir.)

"To sustain the charge of infringement of a patented machine the infringing machine must be substantially identical with the one alleged to be infringed in (1) the result attained; (2) the means of obtaining that result; and (3) the manner in which its different mechanisms operate and co-operate to produce that result. If the machines are substantially different in either of these respects, the charge of infringement is not sustained. Machine Co. v. Murphy, 97 U. S. 120, 24 L. Ed. 935; Gill v. Wells, 22 Wall. 1-14, 22 L. Ed. 699; Fuller v. Yentzer, 94 U. S. 288-296, 24 L. Ed. 103; Fay v. Cordesman, 109 U. S. 408, 3 Sup. Ct. 236, 27 L. Ed. 979; Rowell v. Lind-

say, 113 U. S. 97, 5 Sup. Ct. 507, 28 L. Ed. 906; Adams Electric Ry. Co. v. Lindell Ry. Co., 77 Fed. 432, 23 C. C. A. 223; National Hollow B. B. Co. v. Interchangeable B. B. Co., 106 Fed. 693, 45 C. C. A. 544." (American Steel & Wire Co. v. Denning Wire & Fence Co., 176 Fed. 564, at 565 (affirmed 194 Fed. 117 – C. C. A. 8th Cir.))

This rule requires that the comparison be made of the individual mechanisms embodied in defendants' elevators with those disclosed in the Parker patent, and the manner in which the different mechanisms respectively operate and cooperate. Plaintiff has made no such comparison. It has compared only the final functions performed and the final result attained. A comparison of the kind required by the settled rule of law at once establishes that the defendants' elevators do not meet the test for infringement.

Parker's Car Switch.-

The car-switch of the Parker patent has no counterpart in defendants' machine. The car-switch in defendants' system has no separately movable arms carrying contacts similar to the contact 9 of the Parker car-switch nor any holding and releasing magnets for the car-switch corresponding to the holding magnet 32 and the releasing magnet 37. In defendants' elevators, when the car-switch is moved to the right or left the elevator car is started, but a return of defendants' car-switch to neutral position or any further operation thereof is without operative effect. After the car starts, its continued operation and stopping is not under the control of any part of the car-switch The car-switch in the Parker patent is a master control

switch, because the continued movement of the car is at all times dependent upon and controlled by the contacts of the car-switch. The car-switch employed in the Pacific Finance installation is not a master switch.—

"A master switch usually has what we may call a master control or, in other words, gives the operator complete control of the car by means of a switch." [DeCamp,- R. 385.]

Plaintiff made no attempt to show that the car-switch employed in defendants' elevators has anything to correspond with the circuit-closing plate 9 or the holding magnet 32, except to assert that these were transferred in defendants' elevators to somewhere on the panels in the pent-house. Plaintiff's expert admitted that he could not identify these in defendants' elevators [R. 542]. Judge James specifically finds [R. 643]:-

"There is no similarity between the control lever of the defendants' system and the Parker specially designed starting lever with its circuit closing plates held by an electro magnet. There is no identity, substantial or of other kind, between the Parker coil 32 and relay 46, the 2U or 2D switches, or other innumerable circuit holding relays and contactors used in defendants' high speed elevator control system."

The contact plate 9 of the Parker car-switch is closed to start the car and is opened to stop the car. There is no contact in defendants' elevators which is closed to start the car and is opened to stop the car. The car-switch of the Parker patent, and the car-switch employed in defendants' elevators, are not constructed the same, perform different functions, and do not operate in the same way.

Parker's Primary Circuit.-

The primary circuit of the Parker patent does not exist in defendants' elevators. Closing the primary circuit in the Parker patent starts the car by energizing the pole changing switch. The Parker elevator continues to move as long as the car-switch keeps the primary circuit closed. Opening the primary circuit stops the car. In the defendants' elevators there is no circuit that is closed to start the car and opened to stop the car. Defendants' system has no neutralizing magnet 37. The running circuit in defendants' elevators (Figure 14 of this brief) is closed to start the car, but is not opened to stop the car. operation of defendants' elevators depends upon the running circuit remaining closed until after the car has stopped. The primary circuit of the Parker patent is closed by the car-switch and opened by the car-switch. The running circuits in defendants' elevators are closed by the car-switch and are opened from the leveling drum. The leveling drum does not release the car-switch in defendants' elevators. The elements of the primary circuit of the Parker patent are not the elements of the running circuits in defendants' elevators. The primary circuit of the Parker patent, and the running circuits in defendants' elevators, do not perform the same functions. operate in different ways. They establish different modes of operation between the respective devices of which they are composed.

Parker's Pole Changing Switch.-

There is no pole changing switch in defendants' elevators. The pole changing switch in the Parker patent is

energized by the primary circuit in one direction to close the motor circuit to start the car up, and in the other direction to close the motor circuit to start the car down. The pole changing switch is deenergized on the opening of the primary circuit to disconnect the motor and stop the car. The poles of the motors of defendants' elevators are permanently connected and no pole changing switch is used. Closing the direction switch (relay #27 on Figure 14 of this brief) in defendants' elevators closes the generator field circuit (Figure 15 of this brief). This direction switch is not opened to stop the car.—

"The slowing down and leveling is not initiated by the opening of the direction switch. The direction or reverse switches would remain closed until the car was brought to the floor."

[Plaintiff's expert,- R. 540.]

The pole changing switch of the Parker patent, and the direction switch in defendants' elevators, are entirely different in construction. They do not perform the same functions. Their modes of operation are distinctly different.

Parker's Floor Selector.-

"The floor selector in defendant's apparatus is constructed in an entirely different manner from the floor selector shown in the Parker patent, so that there is no arm that corresponds to the arm—there is no member that corresponds to the member 34."

[Plaintiff's expert,- R. 542-3.]

One function of the floor selector of the Parker patent is to close the secondary circuit to energize the neutralizing magnet 37. This releases the car-switch contact and opens

the primary circuit. Opening the primary circuit releases the pole changing switch and disconnects the elevator motor; disconnecting the elevator motor automatically sets the brake. The second function of the floor selector of the Parker patent is to level the car with the floor landing. This is accomplished by arranging the contacts on the floor selector so as to allow for the timely operation of the brake.—

"Of course, it will be understood that the timing of the automatic secondary circuit closing means may be so arranged as to allow for the timely operation of the usual braking mechanism to overcome the momentum of the car so that the ultimate point at which the car comes to rest will be in proper alinement with the floor level." (Parker patent, p. 5, lines 18-26.)

The point at which the Parker car will stop depends upon how far the car is from the floor landing at the time the secondary circuit is closed by the floor selector.

In defendants' elevators the floor at which a car is to stop in response to the car-buttons is selected by the switches on the primary slow down drum; the floor at which a car is to stop in response to the hall-buttons is selected by the Randall machine. The latter is connected to the switches on the primary slow down drum. The closing of the switch on the primary slow down drum in each case closes a circuit to the secondary slow down drum. The operation of the secondary slow down drum decelerates the car. The car is finally stopped from the leveling drum. There is no floor selector in defendants' system that closes a secondary controlling circuit to release the car-switch and break the running circuit. The running circuit is broken by the leveling drum. There is no floor

selector in defendants' elevators that operates to level the car with a floor landing. The closing of the floor selector circuits in defendants' elevators is not timed to rely upon the operation of the brake to bring the car to a stop in proper alignment with the floor level. The switch on the Randall selector is closed when the car is one-and-ahalf floors from the landing, and the switch on the primary slow down drum is closed when the car is twelve feet from the landing. The deceleration and stopping of the car is controlled from the secondary slow down drum and leveling drum. Neither of these can select the floor at which the car is to stop. The construction of floor selector described in the Parker patent is not employed in the defendants' elevators. The functions performed by the floor selector of the Parker patent are different from the functions performed by the floor selectors in defendants' elevators. The floor selectors in the Parker patent and in defendants' elevators cooperate with entirely different mechanisms, to operate in entirely different ways.

Parker's Secondary Control Circuit.

The secondary control circuit of the Parker patent includes a push-button, a floor selector contact, and the neutralizing magnet for opening the car-switch. There is no such circuit in defendants' elevators. There is no circuit in defendants' elevators which will open the car-switch. The car-switch contacts in defendants' elevators can be opened only by the operator moving the car-switch lever to neutral. The circuits from the car push-buttons in defendants' elevators lead only to the switches on the primary slow down drum. The circuits from the hall-buttons in defendants' elevators lead only to the Randall machine. The circuits from the Randall machine lead to

the switches on the primary slow down drum. The circuits from the primary slow down drum do not lead to the car-switch or to the running circuits. They connect only with the switches on the secondary slow down drum. No circuit in defendants' elevators includes the elements of the secondary control circuit of the Parker patent. No circuit in defendants' elevators performs the function of the secondary control circuit of the Parker patent. There is no circuit in defendants' elevators which operates in the same way or in any similar way to the secondary control circuit of the Parker patent.

Defendants' Slow Down and Stopping Machine .-

"Wonderful ingenuity is displayed in the highly complicated slow down and floor selector machines used by the defendants." [Judge James, - R. 643.]

The operation of this machine has already been described in this brief. It is the most important element in defendants' elevators. Defendants do not attempt to stop or level an elevator car by the circuit closed by the switch on the primary slow down drum. This circuit in defendants' elevators does not open the running circuit. The switch on the primary slow down drum operates to close a circuit to a switch on the secondary slow down drum. The cam-operated switches on the secondary slow down drum then operate circuits to slow down the elevator car by inserting steps of resistance in the generator field circuit. The last of these switches transfers the control of the car to the leveling drum. The car at this time has been slowed down to a speed of 50 feet per minute. The switches on the leveling drum then operate circuits to substitute a damping field for the generator shunt field.

This slows the car down to a creeping speed. The running circuit is opened from the leveling drum when the car is traveling at a speed of only 25 feet per minute. The brake is not set until the car has arrived at less than three-quarters of an inch from the landing and is traveling at the creeping speed. The power is cut off from the hoisting motor after the car has been brought to a complete stop.—

"The 2U and 2D switches operate intermediately only. For instance, referring to the use of 2U, which operates during the up movement of the elevator car; On the primary leveling drum carrying the 2U switch, the cam is short and only makes momentary contact, and then drops out and remains out. This contact causes relay No. 4 to energize relay No. 1. Relay No. 1 sets up a self-holding circuit, which maintains No. 1 during the slow down period until the car latch is raised. Relay No. 1 carries three normally open contacts, and one normally closed contact. One of the open contacts maintains No. 1 closed until the latch is raised. The second contact of No. 1 energizes coil 31, which is slow down contactor through resistor. The third contact on No. 1 energizes one side of coil 6, 7, 8, all of which, among others, insert resistance in the generator field in conjunction with the secondary slow down drum to reduce speed in diminishing steps. Without following through by number the contacts intervening or describing specifically the detailed operation of the 3-E switches on secondary slow down drum, the point is reached where the back contact of No. 11 relay closes and circuit is set up to transfer the direction contactors to leveling drum No. 4 carrying the MS switches. After this time, direction contactor is entirely under the control of the cams on leveling drum

No. 4. The car is then traveling at only the rate of about 25 feet per minute. When the car reaches within a fraction of an inch of the floor, the 4 MS switch is released by the cam running out from the switch roller, direction contactor 27 is opened to kill the generator field, the brake is released through contactor 29, the car stops level with the floor, contactor 15 on brake release 29 thereafter opens 31 and main line 48 and motor field 19 is deenergized. As before mentioned, the last operation occurs after the car has come to a complete stop." [Judge James, - R. 642-3.]

The slow down and stopping operations occur after the switch on the primary slow down drum has dropped out and ceased to function. The slow down and stopping operations are dependent on the continued travel of the car to actuate the switches on the secondary slow down drum and the switches on the leveling drum. This is an entirely different mode of operation from that described in the Parker patent. There is nothing in the Parker patent that corresponds to the secondary slow down drum and the leveling drum in defendants' elevators. When a secondary controlling circuit is completed by the floor selector in the Parker patent, the stopping of the car is not dependent in any way upon continued movement of the car subsequently actuating any further switches or circuits. The presence of the automatic slow down and stopping machine in defendants' elevators imparts a fundamentally different mode of operation from that described in the Parker patent.

Without greatly extending this brief, it is not possible to deal with all the substantial differences in means, mode of operation, or combinative relation of devices existent between the disclosure of the Parker patent and defendants' elevators. We have used the foregoing comparison of Parker's Car Switch, Primary Circuit, Pole Changing Switch, Floor Selector, Secondary Control Circuit, and Defendants' Slow-Down and Stopping Machine to illustrate the totally distinct "idea of means", "mode of operation", and "combinative relation" embodied in defendants' elevators. The contrast might well be carried much further and in greater detail, but sufficient comparison has been made to demonstrate that defendants' elevators embody a different and distinct combination in patent law from the disclosure of the Parker patent.

Different Combination.-

The patent in suit describes a particular combination of admittedly old elements. The defendants' elevators employ a different combination of elements. There is no infringement unless these combinations are identical within the meaning of this term in the patent law. The test of identity of combination is well settled.—

Robinson on Patents, Vol. I., p. 384:"§277. Identity of Combinations, how Tested.

"A combination is a group of elements united in a method of co-operation. In its identity two subordinate identities concur: identity of elements; identity in the mode of their co-operation. The essential qualities of a combination thus include the essential qualities of each of its constituent elements, the essential qualities of their method of co-operation, and the essential qualities resulting from the union of these elements under this co-operative law. Hence in determining the identity of a combination the investigator meets, and is required to answer, the four fol-

lowing questions: (1) What are its constituent elements? (2) What are the essential qualities of each? (3) What is the nature of its co-operative law? and (4) What are the new intrinsic attributes resulting from the combination of the old?"

In Fuller v. Yentzer, 94 U. S. 288, 24 L. ed. 103, at 105, the Supreme Court says:-

"Where the invention is embodied in a machine, the question of infringement is best determined by a comparison of the machine or apparatus constructed, or used by the respondent with the mechanism described in the specification of complainant's patent."

This Court said, in Jensen Can-Filling Machine Co. v. Norton, 67 Fed. 236, at 238:-

"To make a case against the defendants of infringement of this patent, the Jensen machine must be shown to have substantially the same combinations, including every one of the above-mentioned devices, or mechanical equivalents for any that may have been omitted. 'Mechanical equivalents,' as that phrase is to be understood in this connection, are such devices as were known previously, and which, in the particular combination of devices specified as constituting the patented invention, can be adapted to perform the functions of those specified devices for which they are employed as substitutes, without changing the inventor's idea of means. In other words, without introducing an original idea, producing, as the result of it, an improvement which is itself a patentable invention."

Applying the foregoing rule, it is at once apparent that there is no identity of combination between the defendants' elevators and the Parker patent such as required to establish infringement.-

- (1) The constituent elements of the two combinations are different;
- (2) The essential qualities of the two combinations are different;
- (3) Their respective laws of co-operation are different;
- (4) Nothing that is new in the combination of the Parker patent is employed in the defendants' elevators.

The elements of defendants' elevators cooperate in an entirely different way and employ a totally different mode of operation from those disclosed in the patent in suit. This establishes that the combination used by the defendants is not legally identical with that described in the patent in suit.—

"If the mode of operation of an alleged infringing thing is substantially different from that covered by the claim alleged to be infringed, it follows that the charge of infringement must be negatived; * * *."

(Walker on Patents (6th Ed), Sec. 402, p. 491.)

"Where the mode of operation of the alleged infringement is substantially different from that of the patent in suit, infringement does not exist."

(Hopkins on Patents, Section 279.)

"If the device of the respondent shows a substantially different mode of operation, even though the result of the operation of the machine remains the same, infringement is avoided."

(Cimiotti Unhairing Co. v. American Co., 198 U. S. 398, at 414; 49 L. ed. 1100, at 1107.) "The two capital criteria by which to determine the question of infringement are structure and mode of operation. Where both of these are substantially the same in two machines, their identity for purposes of the patent law is established; but, when either is absent, the requisite identity to constitute infringement is as a rule wanting."

(American Steel & Wire Co. v. Denning Wire & Fence Co., 194 Fed. 117, at 120 - C. C. A. 8)

The authorities establish that two combinations possess the same mode of operation only when the allegedly corresponding elements of both combinations are united by the same cooperative law so that the elements perform their individual function by applying the same force to the same objects or elements. A study of the authorities will show that the test is stated by the authorities in the following expressions:

- (1) That the elements of each system must perform "the same function by applying the same force to the same object." (Hardison v. Brinkman, 156 Fed. 962, 967 C. C. A. 9)
- (2) The elements "must be united together by the same cooperative law."

(Leeds & Catlin Co. v. Victor Talking Machine Co., 213 U. S. 301, 320, 53 L. ed. 805, 813.)

(3) The elements "must perform that function by applying the same force to the same object, through the same mode of application."

> (Dey Time Register Co. v. Syracuse Time Recorder Co., 152 Fed. 440 at 450.)

(4) The elements in each must be arranged the same. The combinations are not the same, "even

though the same ingredients are used, if arranged and used in a substantially different manner."

(Machine Co. v. Murphy, 97 U. S. 120, 24 L. ed. 935.)

Many applications of this rule might be made to the instant case. One example is as follows: In the Parker patent the floor selector and the secondary control circuits "operate upon" the running circuits to stop the car. In defendants' system the floor selector or secondary control circuits are combined with an entirely non-comparable device—the automatic slow-down and stopping machine. It cannot be said, therefore, that the floor selector or the secondary control circuits of defendants' elevators apply the same force to the same object, nor can it be said that the cooperative law is the same, nor can it be said that the elements of defendants' system operate upon the same elements, or that there is the same relationship of elements. This demonstrates that defendants' elevators do not have the same combination as that described in the Parker Patent.

Plaintiff asserts that the use of the automatic slow down and stopping machine in defendants' elevators is but a mere addition or improvement to the Parker patent. It is of course the rule that a mere improvement or addition to a patented machine does not take the device out from under the scope of a patent. But the term "addition" or "improvement" in this sense has a special meaning. It does not mean that the patent covers all better machines. There must be substantial identity of the elements of the patented combination present in the defendants' machine, and not only the mode of operation of

the patented combination as a whole, but substantial identity in the respective alleged comparable elements, both in structure, function, and mode of operation. If by the insertion of a new element into the patented combination, or by a re-arrangement of the manner in which the elements of the patented combination cooperate together, the patented combination is broken up, a new and different combination is produced. This is the effect of the presence of the automatic slow down and stopping machine in defendants' elevators.

"There is no infringement where the combination claimed is changed or destroyed by an addition making a new combination; * * *." (48 Corpus Juris, p. 316.)

"For where several elements, no one of which is novel, are united in a combination which is the subject of a patent, and these several elements are thereafter united with another element into a new combination, and this new combination performs a work which the patented combination could not, there is no infringement."

(United States v. Berdan Firearms Mfg Co.. 156 U. S. 552, 39 L. ed. 530, at 534.)

"If however, such changes of size, form, or location effect a change in the principle or mode of operation such as breaks up the relation and co-operation of the parts, this results in such a change in the means as displaces the conception of the inventor, and takes the new structure outside of the patent."

(Union Steam Pump Co. v. Battle Creek Steam Pump Co., 104 Fed. 337, at 343.)

This rule was applied by this Court in Smith Cannery Machines Co. v. Seattle-Astoria Iron Works Co., where

Judge Gilbert said that a mere improvement or addition does not avoid infringement because the machine complained of is superior, more useful or more suitable.—

"unless its superiority is due to a difference in function or mode of operation or some essential change in character." (261 Fed. 85, at 88.)

Lack of Equivalency.

Infringement cannot be shown by the mere assertion that the elements of defendants' combination are the equivalent of the elements described in the patent. Plaintiff claims that such equivalency exists because the final result accomplished by the defendants' elevators is the same as the result alleged to be accomplished by the Parker patent. This is not the test of equivalency.—

"The argument used to show infringement assumes that every combination of devices in a machine which is used to produce the same effect is necessarily an equivalent for any other combination used for the same purpose. This is a flagrant abuse of the term 'equivalent.'

(Westinghouse v. Boyden Power Brake Co., 170 U. S. 537, 568, 42 L. ed. 1136, 1147.)

There is no equivalency unless there is substantial identity of the individual elements, and these elements must perform the same functions by applying the same force to the same object through the same mode of application. This is the only legal test of equivalency. Plaintiff has not applied that test.

"A mechanical equivalent which may be substituted for an omitted mechanical element in a combination claim is one that performs the same function by applying the same force to the same object through the same means and mode of application."

(Hardison v. Brinkman, 156 Fed. 962, at 967 (C. C. A. 9th Cir., Judge Gilbert.))

Where an additional element is inserted into a combination and the remaining elements are so arranged that instead of cooperating together as they did in the patent in suit, they cooperate with the new element in a different manner, then the combination operates according to and in obedience to another and different cooperative law and is a separate and independent invention—not a mere substitution of mechanical equivalents.—

"An equivalent must not vary in any manner the idea of means, or affect it in any degree. It is quite true that the equivalent may perform some new or additional function in the invention, and still be an equivalent; but it must perform all the functions of the element for which it is a substitute in substantially the same way, and I do not think that it is material that the element for which another is substituted has more parts or less parts. The substitution of an equivalent is, however, a mere change of parts and form involving no inventive skill, but suggested by the invention itself to every person skilled in the particular art. If the alleged equivalent not only performs the function of the element for which substituted, and perhaps more, but introduces into the combination a new idea, or new ideas, or a much more extended development of the idea of means, then we do not have the substitution of an equivalent, but a patentable improvement—something different in principle and function. In combination claims this is especially true. 1 Rob. on Patents, 254; Wells v. Curtis, 66 Fed. 318, 13 C. C. A. 494; 20 Eng. Pat. Cas. Am. Notes, 271.

"When we have in combination certain elements working together and co-operating to produce a given result, they work in accordance with and in obedience to some law of co-operative action. When we change one element which works and operates differently from the one for which it is a substitute we necessarily change the action of all, and then the combination operates according to and in obedience to another co-operative law, and we have a new combination working in a different way to produce a result, and it may be the same result; but it is not obtained in the same way by the co-operation of the same elements or their equivalents. Such, in my judgment and opinion, is this case. It is not enough that the two elements, one of which is alleged to be the equivalent of the other, perform the same function when in the same place; but they must perform that function by applying the same force to the same object, through the same mode of application. Goodyear Dental Vulcanite Co. v. Davis, 102 U. S. 222, 26 L. Ed. 149, which was a patent for a process; Burr v. Duryee, 1 Wall. 531, 572, 17 L. Ed. 650, 660, 661; Westinghouse v. Power Brake Co., 170 U. S. 568, 569, 18 Sup. Ct. 707, 42 L. Ed. 1136; Curtis on Patents, (4th Ed.) Sec. 310; Machine Co. v. Murphy. 97 U. S. 125, 24 L. Ed. 935; Carter Machine Co. v. Hanes, (C. C.) 70 Fed. 859, 865; Duff Mfg. Co. v. Forgie, 59 Fed. 772, 775, 8 C. C. A. 261, citing and approving 1 Rob. Pat. Cas. Sec. 247."

(Dey Time Register Co. v. Syracuse Time Recorder Co., 152 Fed. 440, at 450-1.)

The test for equivalency establishes at once that the elements employed in defendants' elevators are not the equivalents of the elements described in the Parker patent. The elements in defendant's elevators do not perform the

same functions, by applying the same force to the same object, through the same means and mode of application. No attempt has been made by plaintiff to show this. The comparison already made in this brief demonstrates that there is no equivalency. Judge James correctly found that the Parker system cannot by any reasonable modification be transplanted into the elevator control system of the defendants and that any attempt so to do would result in the essential means described by Parker being utterly changed, obliterated and lost, so that no substantial identity could be ascribed to the resulting combination. [R. 640-1.] The elements employed in defendants' system can be contrasted, but not compared, with the elements described in the Parker patent. This is true both of the construction of the elements and their mode of operation. As said by Judge James [R. 643]:-

"There is no similarity between the control lever of the defendants' system and the Parker specially designed starting lever with its circuit closing plates held by an electro magnet. There is no identity, substantial or of other kind, between the Parker coil 32 and relay 46, the 2U or 2D switches, or other innumerable circuit holding relays and contactors used in defendants' high speed elevator control system."

The same is true of all the other elements employed in defendants' system.

Use of Old Elements.-

The only comparison that plaintiff attempts to make between the means employed in defendants' elevators and the means described in the Parker patent is to assert that both accomplish the same final result and that each em-

plovs certain elements, such as buttons in the hall and in the car; a car-switch; an elevator motor; a floor selector; electric circuits, etc. Every element compared by plaintiff was in common use in elevators in the prior art. Plaintiff has not asserted that there is any element present in both defendants' machine and in the Parker patent that was not used in the prior elevator art for performing the same function. Plaintiff has not attempted to show that the elements compared by plaintiff are combined together in defendants' elevators and in the Parker patent in the same way. Such a comparison does not in any way prove infringement in this case. Defendants are not guilty of infringing the Parker patent, in using elements that were old in the prior art, because these same elements are used in the Parker patent. All these elements are in law open to use by the defendants. No one of them is claimed to be the invention of Parker. The decision of the Supreme Court in Electric R. R. Signal Co. v. Hall Ry. Signal Co., 114 U. S. 87, 29 L. ed. 96, 98, is a leading case establishing the foregoing rule. The patent there in suit was for an electric signal control system. It differed from the Parker patent only in that it was used on railroads instead of elevators. The elements of the patent consisted of relays, switches, selectors and circuits. Plaintiff there claimed that the patent covered a certain "block" system of controlling railroad cars. The court said:

"It is upon these two points that the question of infringement depends.

"In considering them it is important to bear in mind that the patent is for a combination merely, in which all the elements were known and open to public use. No one of them is claimed to be the invention of the patentee. He does not claim them himself as separate inventions. It is simply a new combination of old and well-known devices, for the accomplishment of a new and useful result, that is claimed to be the invention secured by the patent. And the well settled principles of law heretofore applied to the construction of patents for combinations merely, must apply and govern in the present case.

"The object of the patented combination was the accomplishment of a particular result, that is, to work electric signals on what was known as the 'block' system, by means of circuits, operated by a single battery instead of many. But this result or idea is not monopolized by the patent. The thing patented is the particular means devised by the inventor by which that result is attained, leaving it open to any other inventor to accomplish the same result by other means. To constitute identity of invention, and therefore infringement, not only must the result attained be the same, but in case the means used for its attainment is a combination of known elements, the elements combined in both cases must be the same, and combined in the same way, so that each element shall perform the same function, provided, however, that the differences alleged are not merely colorable, according to the rule forbidding the use of known equivalents."

"The patent is granted for the combination, as 'the particular means devised by the inventor by which that result is attained,' and the patentee is entitled to protection against any use of the same combination of elements, combined in the same way, so that each element performs the same function, or against substantially the same use with deviations which are merely colorable. But each of these well-known elements remains open to the use of the sub-

sequent inventor for a different combination for like results. Electric Signal Co. v. Hall Signal Co., 114 U. S. 87, 96, 5 Sup. Ct. 1069, 29 L. Ed. 96."

(Milwaukee Carving Co. v. Brunswick-Balke-Collender Co., 126 Fed. 171, at 184 – C. C. A. 7)

"Much of the brief for appellant is devoted to pointing out likeness in details between the elements of the patented machine and defendant's machine. The force of these arguments is greatly weakened, if not wholly destroyed, by the conceded fact that the elements of these machines are old in the art of fence making. All that Bates did was to combine them in the requisite plurality and particularly the mechanism for feeding the plurality of stay wires simultaneously and transversely of the strand wires in straight line sequence. The modifications which he made in the old elements in order to combine them in this plurality certainly required, when compared with the prior art, no greater exercise of inventive talent than was used by defendant in making the modifications necessary to substitute continuous for intermittent action. Both used the same old elements and hence it is an easy matter to point out likenesses."

(American Steel & Wire Co. v. Denning Wire & Fence Co., 194 Fed. 117, at 120 - C. C. A. 8)

The rule established by these cases is peculiarly applicable here. Plaintiff admits that the defendants' elevators do not employ the type of floor selector, the type of car-switch, the type of elevator motor, the type of running circuit, or the type of secondary control circuit, described in the Parker patent. Plaintiff asserts that defendants have substituted for these the common type of elements employed in the prior art. The rule of these

cases establishes that defendants had the right to do this so long as they did not combine them in the way described in the Parker patent. We have already demonstrated that the relation of these elements in defendants' elevators is entirely different from the relation of the elements described by Parker. Certainly, under this rule, the defendants cannot be held for infringement merely because they use the common form of push-button stopping cirsuits described in the prior art in the Smalley & Reiners and Ihlder patents.

Failure of Proof .-

No further citation of authority is required to demonstrate that plaintiff cannot establish infringement by merely showing that defendants' elevators accomplish the same result alleged to be accomplished by the Parker patent. The burden of proof was on plaintiff to establish the identity of the elements employed in the defendants' elevators with the elements described in the Parker patent, and that these elements cooperate in the same way. Plaintiff made no attempt to identify the elements in defendants' elevators that plaintiff alleged correspond to the elements of the Parker patent. For example, plaintiff's expert was asked to make a comparison, and testified as follows:—

"The witness was asked how the structure shown in the Parker patent compares with the construction and operation of the Otis Elevator Company's signal control elevators. Objected to as not the best evidence. Objection overruled. Exception.

"The witness answered: They are the same."

[R. 147.]

When asked on cross-examination what he meant by his answer that they were the same, plaintiff's expert testified that he meant only that they performed the same function.—

"Q. What do you mean when you say a thing is just the same? A. I mean it performs the same function. Q. You don't mean it does it in the same way or that it is constructed the same? A. No."

[R. 212.]

At another point in the trial an expert for plaintiff was asked to identify the part in defendants' elevators that was claimed to correspond to part 4 of the Parker patent. He testified as follows:

"The part of defendants' installation that corresponds to the part 4 is a relay contact upon one of the control panels. It is the one that is actuated by the circuit that is set up by moving the car switch lever into operating position. I cannot locate it as I do not recall just where it is on the control panel."

[R. 542.]

No attempt was made by plaintiff to show that there is any similarity in the construction of such elements or in the way they functioned. The court below has found that there is no similarity. The record contains no testimony in conflict with this finding of the court. There is a failure of proof on plaintiff's part on the issue of infringement. This Court should not now be called upon to make the necessary comparison. In the absence of any testimony, this Court is not required to review the finding of the court below. If plaintiff's expert witnesses could not identify the elements in defendants' elevators that were

contended to correspond to the elements in the Parker patent, it is unreasonable to expect this Court to do so.-

"The complainant has vouchsafed no explanation of the construction or operation of this patent, other than that he finds the elements and combinations covered by said claims in defendant's machine: that defendant's yielding head accomplishes practically the same results and is a mechanical equivalent of that claimed in plaintiff's patent; 'that he never put upon the market a machine exactly such as is described in said patent,' but that his commercial collar and cuff edger 'contains all or substantially all of the elements in those patents;' and that 'defendant's machine is mechanically substantially the same, as far as the elements contained in it are concerned, as the devices that are described by the elements claimed in the two aforesaid patents.' With the exception of a discussion of some of the phraseology of claim 33, this is all the material evidence as to this patent in the record.

* * * * * * * *

"We do not question the rule which permits a complainant to introduce a patent whose mechanical details are simple, and where the issue of infringement is sharply defined, without burdening the court with useless expert testimony. But this rule has no application to a case like this, where the operative construction embodies only a portion of the two patents in suit; where material and difficult questions of form, of operation, and of equivalency of function are involved; where the validity of a reissue is challenged on the ground that the reissued patent is for a different invention; and where the 39 claims of one of the patents are projected before the court without any attempt to analyze them, or read them upon defendant's patent or commercial machine. Wa-

terman v. Shipman, 55 Fed. 982, 5 C. C. A. 371."

(Fay v. Mason, 127 Fed. 325, at 330-333 –
C. C. A. 2nd Cir.)

Plaintiff's Exhibit 16 was introduced at the trial of this case to show infringement of the Parker patent by defendants' elevators. This exhibit purported to show the arrangement of the circuits and elements in defendants' elevators. The exhibit was a pure figment of plaintiff's imagination. It was the only attempt made by plaintiff in the evidence to make an element-for-element comparison of defendants' elevators with the Parker patent, and it is a sham. Plaintiff's witnesses were compelled on cross-examination to admit that the circuits and devices shown on this exhibit do not exist in defendants' elevators.—

"Plaintiff's Exhibit 16 does not show the wiring as it actually exists." [R. 232.]

Exhibit 16 illustrates a relay marked "E." This relay. as shown in Exhibit 16, is energized by the selector circuit and provided with a switch or contact in a primary circuit leading to a pole changing switch. Exhibit 16 represents that there is a primary circuit to a pole changing switch to energize a motor in defendants' elevators. Exhibit 16 also represents that there is a secondary circuit in defendants' elevators which breaks the primary circuit to deenergize the pole changing switch to stop the car. [R. 239-40.] These are but a few examples of the misrepresentations embodied in Exhibit 16. There are no such elements in defendants' elevators. The master did not accept Exhibit 16 in his report and said that:—

"Plaintiff's Exhibit 16 is argumentative rather than illustrative." [R. 575.]

At the argument of this case before the district court plaintiff's counsel admitted that Exhibit 16 does not correctly describe defendants' system and that it should not be used in this case.—

"Mr. L. S. Lyon: There is one thing I would like to caution your Honor against and that is Plaintiff's Exhibit No. 16. They made a diagram that looked as much like the Parker diagram as they could get it and said that that was our system. And the Master rejected that. That should not be used at all. It is referred to in plaintiff's brief, but it should not be used. It shows a floor selector purporting to be in the defendant's system, with a circuit back to the car and all that. And, as the Master says, it is purely argumentative.

"Mr. Lane: I have admitted that, your Honor." [R. 548-9.]

Notwithstanding this, Exhibit 16 is reproduced as Plate II in the Appendix to Plaintiff's Brief on this appeal. This is inexcusable. It cannot be accounted for on any theory except that plaintiff desires to mislead the Court. Plaintiff says in its brief (p. 60):-

"For further simplification we have left in the Appendix to this Brief 'Plaintiff's Exhibit 16' [R. 142] which as the master says [R. 575] 'is argumentative.' Still, taken in connection with the evidence of Mr. Crabbe [R. 152-158], it enables one to readily perceive from this schematic drawing, that defendants' installation utilizes, and is dominated by Parker's 'Control'."

This can only mean that plaintiff concedes that the comparison between defendants' elevators and the Parker patent begins and ends with a comparison of the result only. Exhibit 16 is not to be understood as showing the elements employed in defendants' elevators or the way in which those elements function. The cross-examination of plaintiff's expert Crabbe established that the mechanism and circuits appearing on Exhibit 16 do not exist in defendants' elevators. Exhibit 16 has no probative value and is no evidence of infringement.

Claim 3.-

Plaintiff elected to stand in this case upon claims 3, 22, 29, 37, 40, 41 and 65 of the re-issue patent in suit [R. 51]. Claim 3 was a claim of the original Parker patent. Claims 22, 29, 37, 40, 41 and 65 were obtained by the re-issue. Claim 3 is expressly limited to features that are not used in defendants' elevators. The claim has the following elements:

- (1) a guided movable body;
- (2) an electrical controlling circuit;
- (3) a *switch on said body* manually operable for closing said circuit;
- (4) means *holding said switch* in circuit closing position;
- (5) selective means for actuating the release of said switch holding means to stop said body at one or more predetermined points in the line of its travel, said selective means comprising
- (5a) a manually operable circuit closer to be actuated prior to the arrival of the body at a selected stopping point, and
- (5b) an automatic circuit closer actuated upon the arrival of the body at said selected stopping point.

This claim is expressly limited to a combination in cluding means for holding the switch on the car in closed position and in which the circuit from the floor selector releases the car switch holding means. The claim does not include holding means for a switch which switch is not in the car and does not include the use of a selector circuit which does not release the holding means. words "a switch on said body" of element (3) expressly locate the switch on the elevator car. The words "means holding said switch" in element (4) expressly limit this element to means for holding the car switch. The words "selective means for actuating the release of said switch holding means" of element (5) expressly ascribe the function of releasing the car switch holding means to the selector. These limitations clearly distinguish the claim from defendants' elevators. The car switch in defendants' elevators has no holding means. Both the car switch handle and the car switch contacts in defendants' elevators may be returned to neutral without stopping the car (Figure 14 of this brief). The circuit completed by the floor selector in defendants' elevators does not release any holding means in the running circuit. It only completes a circuit to a switch on the secondary slow down drum. The running circuit is opened from the leveling drum after the slow down machine has functioned.

The master ignored the foregoing limitations in claim 3. He did so because he found the form of car-switch described by Parker and the use of the selector circuit to open that car switch would not be an advance, but a step backward, in the art.—

"It is evident that Parker specified his self-holding switch's location within the car in ignorance of the practice then followed by workers in the art, which are aimed at removal of as many circuits as possible from the car." [Master's Report,- R. 581.]

"The actual form of his (Parker's) car switch is possibly a new form of a self-holding switch but it is evident that his form of switch was not an improvement. It was but a crude conception when compared with older means. At that time engineers had learned to put as many of the control circuits as possible in the pent-house and not in the car. It would be a step backward to bring the secondary circuits through the car." [Master's Report,—R. 562.]

The master clearly erred in concluding that because of this he should disregard the limitations of claim 3:

"But, whether the invention is large or small, primary or trivial, it remains true that, when a claim is clear and distinct, the patentee cannot go beyond the words thereof for the purpose of establishing infringement; the specification may be referred to for the purpose of limiting, but not of expanding, a claim, and the range of equivalents is measured by what is described *and* claimed. Westinghouse, etc., Co. v. New York, etc., Co., 119 Fed. 874, 56 C. C. A. 404; Universal, etc., Co. v. Sonn, 154 Fed. 665, 83 C. C. A. 422; Loraine, etc., Co. v. General, etc., Co., 202 Fed. 215, 120 C. C. A. 615; Fowler, etc., Co. v. McCrum, etc., Co., 215 Fed. 905, 132 C. C. A. 143."

(Homer Brooke Glass Co., et al., v. Hartford-Fairmont Co., 262 Fed. 427, at 430 - C. C. A. 2)

The limitation in claim 3 to the location of the car switch in the car and the use of the holding means to control that switch cannot be ignored in interpreting the claim or determining equivalency.—

"From a review of these and other familiar cases, we think it is safe to deduce the proposition that where the claim defines an element in terms of its form, material, location or function, thereby apparently creating an express limitation, where that limitation pertains to the inventive step rather than to its mere environment, and where it imports a substantial function which the patentee considered of importance to his invention, the court cannot be permitted to say that other forms, which the inventor thus declared not equivalent to what he claimed as his invention, are nevertheless to be treated as equivalent, even though the court may conclude that his actual invention was of a scope which would have permitted the broader equivalency."

(D'Arcy Spring Co. v. Marshall Ventilated Mattress Co., 259 Fed. 236, 240 - C. C. A. 6)

"A patent for protecting a spring by locating it on the inside of the trolley harp is not infringed by placing it in a recess on the outside, any more than a patent for protecting it by countersinking it on the outside is infringed by locating it wholly on the inside. Although the result may be the same, the device is different, and the patent covers only the device." (Star Brass Works v. General Electric Co., 131 Fed. 78, at 81 – C. C. A. 6th Cir.)

"In fact, it may be said that defendant's construction is founded on a discovery not disclosed in the patent in suit, namely, that the change, which the patentee supposed could only be obtained by a location in the main or working circuit, might be obtained by a location in the generator circuit. In these circumstances the rule must be applied that, while a patentee is entitled to all the beneficial uses of his invention when the property or function is inherent in the invention or is described or claimed by him, yet that, where such change or function is neither described nor claimed, and especially where other changes are described and insisted on as essential and specifically claimed, it is significant proof that the change which has not been disclosed by him to the public is not his invention. Fastener Co. v. Kraetzer, 150 U. S. 111, 14 Sup. Ct. 48, 37 L. Ed. 1019: Goodyear Tire Co. v. Rubber Tire Co., 116 Fed. 375, 53 C. C. A. 583; Long v. Pope Mfg Co., 75 Fed. 835, 21 C. C. A. 533; Wells v. Curtis, 66 Fed. 318, 13 C. C. A. 494; Bates v. Force Co. (C. C. A., 2d Circuit, Nov. 7, 1906), 149 Fed. 220."

(Electric Storage B. Co. v. Gould Storage B. Co., 158 Fed. 610, at 617 - C. C. A. 2)

The limitation in claim 3 providing that the circuit established by the floor selector shall release the holding means to open the running circuit cannot be ignored. The claim is limited by ascribing that particular function to the circuit. The law is well established that a claim of that character is not infringed where the circuit performs a function that is not the function ascribed in the claim.—

"Where a claim ascribes a function, to any of the things which it specifies, that ascription is a limitation of that claim."

(Walker on Patents (6th Ed.), p. 313.)

"To ignore the express functional limitation of the claim, viz. 'whereby they are enabled to fold back into the case side by side,' would be to create a new claim; not interpret the one granted. The court below rightly held there was no infringement."

(E. & H. T. Anthony Co. v. Gennert, 108 Fed. 396, at 398 - C. C. A. 3rd Cir.)

"The construction contended for by Mr. Benjamin cannot be adopted, because, as a matter of law, it is settled that such a specific statement of function thus inserted into a claim as material cannot be disregarded." (Thompson Meter Co. v. National Meter Co., 106 Fed. 519.)

"In the combination of each claim we find the element of 'arms adapted to engage with the sides of the hole, and to hold the casing to afford resistance to the packer.'

* * * * * * * *

"To ignore the express functional limitation of the claim, viz, 'arms adapted to engage with the sides of the hole,' would be to create a new claim, not interpret the one granted."

(Masseth v. Larkin et al., 111 Fed. 409.)

Non-infringement of claim 3 is clearly demonstrated. The interpretation of this claim given by the master is directly contrary to settled law. At the time plaintiff purchased the original Parker patent, plaintiff recognized that claim 3 was of limited scope. The purchase of the patent by plaintiff was conditioned on Parker executing an application for a reissue of the patent. The reissue application was based on the assertion of plaintiff that all of the claims of the original patent were narrowly limited and that the patent must be re-issued to secure broad claims.

Claim 3 is fully and completely anticipated in the prior art if the foregoing limitations are disregarded. The equivalent of every element of claim 3, except the use of the holding means for the switch within the car and the use of the selector circuit to release that particular holding means, is shown in the prior art patents to Strohm (Exhibit X-10) and Ihdler (Exhibit X-13).

"A combination is identical in substance with what is already known or used, patented, or described in a printed publication, if it consists of the same elements, or their mechanical equivalents, combined in substantially the same way to produce substantially the same result." (48 Corpus Juris, 31.)

The elements of claim 3 appear in the Strohm patent as follows:

CLAIM 3 OF REISSUE LET-TERS PATENT IN SUIT

- STRUCTURE DISCLOSED IN PATENT, DE-STROHM FENDANTS' Ex. X-10.
- (1) The combination with a guided movable body
- Elevator car A movable within its shaft:
- (2) of an electrical controlling circuit,
- The primary control circuit of Strohm (Figure 11 of this brief);
- (3) a switch on said body manually operable for closing said circuit,
- The car-switch 85 (Figure 11 of this brief) or the rope A operating valve 44 to energize magnet f;
- (4) means holding said switch in circuit closing position,
- The magnet f and its contacts 67 (Figure 11 of this brief);
- (5) and selective means for actuating the release of said switch holding means to stop said body at one or more predetermined points in the line of its travel,
- The secondary control circuit (Figure 12 of this brief), which deenergizes magnet f to stop the elevator car:
- said selective means (5a)ually operable circuit

The secondary control circomprising a man- cuit includes the manual circuit closer F which is closer to be actuated prior to the arrival of the body at a selected stopping point, and

(5b) an automatic circuit closer actuated upon the arrival of the body at said selected stopping point.

actuated by the passenger prior to the arrival of the car at the floor; and

The automatic circuit closer 29 actuated by the shoe G when the car arrives at the selected stopping point.

The elements of claim 3 appear in the Ihlder patent as follows:—

CLAIM 3 OF REISSUE LET-TERS PATENT IN SUIT STRUCTURE DISCLOSED IN IHLDER PATENT, DEF'TS EXHIBIT X-13.

(1) The combination with a guided movable body

The elevator car X;

(2) of an electrical controlling circuit,

The control circuit (see Figure 9 of this brief), comprising the circuit to the "up" direction switch magnet coil B¹⁰ or the "down" direction switch magnet B⁹:

- (3) A switch on said body manually operable for closing said circuit,
- Any one of the push-buttons g¹ to g⁶, inclusive, located upon the elevator car (g⁶ being shown in Figure 9);
- (4) means holding said switch in circuit closing position,

The holding magnet D (Figure 9 of this brief), which when energized closes a self-holding circuit

(5) and selective means for actuating the release of said switch holding means to stop said body at one or more predetermined points in the line of its travel.

through its contact D', thereby holding the control circuit closed;

The car is stopped at any one of the floors which it serves by reason of releasing the holding circuit, this selective means including

(5a) said selective means comprising a manually operable circuit closer to be actuated prior to the arrival of the body at a selected stopping point, and

The selective means include the push-button g⁶, which is pressed prior to the arrival of the car at the floor;

(5b) an automatic circuit closer actuated upon the arrival of the body at said selected stopping point.

The selective means also include the selector having automatic operating contacts f⁶ which, when the car arrives at the corresponding floor, release the holding magnet D.

Judge James was clearly correct in finding that the novelty of the Parker patent is limited to the particular form of car-switch described by Parker and the use of the selector circuit to release that car-switch. The claim must be held invalid if given the broad interpretation required to reach defendants' elevators.

Reissue Claims.-

The reissue claims in suit were obviously written in the attempt to expand the specific Parker invention into an

all-inclusive generalization. These claims do not identify the elements described in the Parker patent. They do not specify the way in which these elements operate. The claims were written after plaintiff knew of defendants' elevators. They were not intended to define the invention made by Parker, but to expand the Parker patent to read on defendants' elevators. This type of claim has been frequently condemned by the courts.—

"We think it proper to reiterate our disapprobation of these ingenious attempts to expand a simple invention of a distinct device into an all-embracing claim, calculated by its wide generalizations and ambiguous language to discourage further invention in the same department of industry and to cover antecedent inventions."

(Carlton v. Bokee, 17 Wall. 463, 21 L. ed. 517, at 519.)

The reissue claims are entirely functional in character. The elements of the claims are defined merely as means for performing certain functions. The elements which constitute such means are not stated. The way in which these elements perform their functions is not defined. It is the well settled rule that claims of this type will be sustained only as limited to the particular form of means described in the patent.—

"Where some of the parts of a combination operate therein to give motion to other parts, which do the final work of the combination, it is proper to specify the former by the use of such terms as 'means,' 'mechanism,' or 'devices' for giving that motion, except when these terms are applied to an element or part which constitutes the essence of the invention. If they are used under such circumstances the claim will be regarded as functional. But such

general language will not include all means, mechanism, or devices which can perform that function, but only those which are shown in the patent, and their equivalents. And in this case also, the question wtether other means, mechanism, or devices are equivalents of those shown in the patent, will be determined by the established rules on that subject, rather than by any apparent precision or elasticity of the language used in the claims to designate the parts involved in the inquiry."

* * * * * * * *

"A function is not patentable. The structure and not the function is the thing to be secured by the claim. A functional claim is one that has for its subject the performance of an act merely, and not the means by which that act is executed. It is not for a substantive thing, but for the result which that thing accomplishes. A claim for the function of the invention is void. Where a claim distinctly specifies a certain structure which is adapted to perform a particular function, there is no objection in stating in the claim, the function which the structure is adapted to perform, and such recital of function does not invalidate the claims."

(Walker on Patents, (6th Ed.), pp. 195, 196.

The functional form of the reissue claims does not give to plaintiff a monopoly of any and every kind of mechanism and devices which may perform the functions specified in the reissue claims. This Court has so held in at least two prior cases.—

"Of course, an inventor cannot by the mere use of the word 'means,' in reference to the accomplishment of a designated function in a combination claim, appropriate any and all kinds of mechanism or devices which may perform the specified function, or any other mechanism or device than that which is described in the patent or which is its equivalent. Reference must be had to the specifications to ascertain the means which are made an element of the claim and are protected by the patent."

(American Can Co. v. Hickmott Asparagus Co., 142 Fed. 141, 146 - C. C. A. 9 - Judge Gilbert.)

"In arguing in support of the position that no one has obtained the results produced by the Lyndon invention without using that invention as claimed, appellant would have us hold that in claims 3, 4, 6 and 7 the word 'means' or the like, 'is employed to describe connective features of the combination, and that such terms may be considered to cover practically any substitute part or feature.' Proceeding with his argument, appellant says that, the substance of the claim being the combination, such combination is a unit, and that, where the component parts are recited as interrelated through the agency of means, the claim is to be construed as a unit. We find ourselves unable to sustain this argument. To permit a patentee to burden his claims by the use of indefinite language would lead to supporting him in a monopoly of a principle or result, which would bar other inventors from arriving at the same result by different means." (Henry v. City of Los Angeles, 255 Fed. 769, 778, - C. C. A. 9 - Judge Hunt.)

Plaintiff relies upon the scope given to a functional type of claim by this Court in Bake-Rite Mfg. Co. v. Tom-linson et al., 16 Fed. (2nd) 556. This Court in that case did not depart from the rule of its prior decisions and did not sanction for this type of claim the scope contended for in this case by plaintiff. This has been pointed out by Circuit Judge Parker for the Fourth Circuit Court of

Appeals in its recent decision in *Demco v. Doughnut Mach. Corporation*, 62 Fed. (2nd) 23. The same patent was before the Court in the latter case that was before this Court in the former. Concerning it Judge Parker says:-

"We are dealing not with process patents but with patents covering machine. * * * Plaintiff is entitled to protection against machines which substantially copy the machines which they invented, by doing the same thing in substantially the same way, but not against machines which proceed on a different principle, even though they accomplish the same result. It is elementary that the mere function of a machine is not patentable, and that the claims of a patent must be construed in the light of the specifications and drawings to which they relate, and not given an interpretation so broad as to cover the function of the machine patented and thus protect against every possible machine with like function."

* * * * * * *

"Plaintiff relies upon the case of Bake-Rite Mfg. Co. v. Tomlinson (C. C. A. 9th) 16 Fed. (2d) 556; but the machine there involved was of a very different character from the machines of defendants. Like the machine of Tomlinson, it cooked by the flotation method and the turnover employed might properly be held the equivalent of the Tomlinson turnover. Here the process of cooking is essentially different from that employed by Tomlinson; and, as pointed out above, the turnover employed is not the same thing and is not accomplished in the same way."

In Randall Control & Hydrometric Corporation v. Elevator Supplies Co., 15 Fed. (2d) 767, this Court speci-

fically held that a functional type of claim in a patent in the electric elevator art is not infringed by any and every means for performing the function ascribed in the claim. This Court there held that a functional type of claim in this art is not infringed where the defendant uses a substantially different mechanism and mode of operation, even though the result of the patent is accomplished. Judge Hunt said in that case (pp. 769-70):—

"We do not agree with the argument that Newell's invention clearly comprehends any means controlled directly or indirectly by the operator for closing the second break in the signal-restoring circuit, and that he merely showed the door means as an illustrative preferred construction. His restoration means are confined by his specifications. Of course, there is manual operation in stopping and starting the car in appellant's construction; but the single switch of the restoration circuit is operated by the master switch, which controls the car movement.

"Nor do we think that the single master switch used by the appellant should be held to be merely the equivalent of Newell's stops on his hatch gate. The results produced by Newell and by appellant are the same, but the mechanism and operation are substantially different, and, in the light of the state of the art when Newell's invention was patented, we think that the rules applicable to strict construction must guide us. Miller v. Eagle Mfg. Co., 151 U. S. 208, 14 S. Ct. 310, 38 L. Ed. 121; McCormick v. Talcott, 20 How. 402, 15 L. Ed. 930; Elevator Supplies Co. v. Boedtcher (C. C. A.) 11 Fed. (2d) 615; Goodyear, etc., Co. v. Davis, 102 U. S. 222, 26 L. Ed. 149."

The reissue claims are obviously not infringed when interpreted in accordance with the foregoing rule. De-

fendants do not employ the mechanism or devices which are described in the Parker patent. The mechanism and devices employed in defendants' elevators are, not the equivalents of those described in the Parker patent. The mechanism employed in defendants' elevators operates on a different principle from the mechanism described in the Parker patent. Plaintiff cannot establish infringement merely by the assertion that defendants' elevators and the Parker patent accomplish the same result.

The terms of claim 22 are so broad that this claim reads precisely on many of the prior art patents in evidence. There is nothing in the wording of this claim which distinguishes from the prior patents in evidence. This claim is not limited to an electric elevator system and does not include the primary or secondary control circuits described in the Parker patent. The elements of claim 22 are found in the Strohm patent (Exhibit X-10) as follows:—

A control system for an elevator car (A) comprising, a plurality of control means (F), one for each of a plurality of landings, operable from without the car to cause the stopping of the car at the landings for which the control means are operated, and only one control means for causing the starting of the car (85), said one control means being operable only from within the car.

The elements of claim 22 are found in the Ongley patent (Exhibit X-6) as follows:-

A control system for an elevator car (B) comprising, a plurality of control means (19), one for each of a plurality of landings, operable from without the car to cause the stopping of the car at the landings for which the control means are operated, and only one

control means for causing the starting of the car (5 or 6), said one control means being operable only from within the car.

Ongley does not fail to anticipate this claim because he shows additional means for starting the car (10-11). If these hall starting buttons 10-11 were omitted, the stopping of the car by the hall button 19 and the starting of the car by the car button 5 or 6 would not be affected in mode of operation or function performed. It is not an invention to omit an element of a prior patented combination where such omission is attended by a corresponding omission of the function performed by that element, if the elements retained perform the same function.—

"The novelty, then, must be in the combination, which differs from the combination of an ordinary elevator only in the omission of the storage feature, by which the grain is housed in transit, and its identity lost. While the omission of an element in a combination may constitute invention, if the result of the new combination be the same as before; yet if the omission of an element is attended by a corresponding omission of the function performed by that element, there is no invention, if the elements retained perform the same function as before."

(Richards v. Chase Elevator Co., 159 U. S. 477, 40 L. Ed. 225, at 228.)

The language of claim 29 specifies merely a power-driven car which may be caused to stop at a landing in response to a car-button or a hall-button and which may be started only from within the car. The stopping of a car in response to a car-button or a hall-button is in the alternative. The Parker patent states:—

"It will be understood, that the invention would include the use of such floor buttons when the car buttons were omitted, if such an arrangement should be desired, and *vice versa*." (Pat., p. 3, lines 53-56.)

In view of this statement, the claim may be anticipated by a prior patent having push-buttons either at the hall landings or in the car. (Farnham v. United States, 47 Ct. Cls. 207.) The stopping of the car from the carbuttons has no functional relation to the stopping of the car from the hall-buttons. The use of both car-buttons and hall-buttons is not a patentable combination, but is a mere aggregation of elements that are functionally indifferent to each other. (Reckendorfer v. Faber, 92 U. S. 347, 23 L. ed. 719; Hailes v. Van Wormer, 20 Wall. 353, 22 L. ed. 241.)

The elements of claim 29 are found in the Strohm patent (Exhibit X-10) as follows:-

A control system of the type wherein an elevator car (A) is driven by means of power mechanism (p. 1, lines 20-23), and wherein the power mechanism is caused to stop the car at a landing in response to the operation of either a switch within the car or a switch at the landing (F), characterized by the fact that means (85) are provided only in the car for causing the operation of the power mechanism to start the car.

The elements of claim 29 are found in the Crouan patent (Exhibit X-1) as follows:

A control system of the type wherein an elevator car (K) is driven by means of power mechanism (L), and wherein the power mechanism is caused to stop the car at a landing in response to the operation

of either a switch (i) within the car or a switch at the landing, characterized by the fact that means are provided only in the car for causing the operation of the car mechanism to start the car (m).

The elements of claim 29 are found in the Nistle patent (Exhibit X-14) as follows:

A control system of the type wherein an elevator car (11) is driven by means of power mechanism ("any well known starting and stopping devices [not shown] controlled by the usual cable 12,"—p. 1, lines 53-55), and wherein the power mechanism is caused to stop the car at a landing in response to the operation of either a switch within the car (17) or a switch at the landing, characterized by the fact that means are provided only in the car for causing the operation of the power mechanism to start the car (15).

Claim 29 reads on the Worthen patent (Exhibit X-15) as follows:

A control system of the type wherein an elevator car (2) is driven by means of power mechanism (hydraulic power in Fig. 15 or electric power in Fig. 17), and wherein the power mechanism is caused to stop the car at a landing in response to the operation of either a switch within the car (the lever 59 corresponding to the landing at which the car is to be stopped) or a switch at the landing, characterized by the fact that means are provided only in the car for causing the operation of the power mechanism to start the car (the lever 59 corresponding to the landing the car is at).

Claim 29 also reads on the Ongley patent (Exhibit X-6) as follows:--

A control system of the type wherein an elevator car (B) is driven by means of power mechanism ("hydraulic cylinder or other motor by which the car is raised"—p. 1, line 39—) and wherein the power mechanism is caused to stop the car at a landing in response to the operation of either a switch within the car (15) or a switch at the landing (19) characterized by the fact that means are provided only in the car for causing the operation of the power mechanism to start the car (5 or 6).

The language of claim 40 is vague and indefinite, but by referring to the specification the elements of the claim are shown to be the series of up car-buttons and the series of down buttons together with the starting control mechanism and the car-actuating and hoisting mechanism. The claim specifies that one set of stop switches is responsive only when the car is traveling in one direction and the other set of stop switches is responsive only when the car is traveling in the other direction. The hallbuttons in the Parker patent will stop the car irrespective of the direction of motion of the car [R. 449-50; 100-1]. The two sets of stop-switches referred to in this claim must therefore be the up and down car-buttons described in the Parker patent. Defendants' elevators do not infringe this claim because they do not have two sets of car-buttons, one set responsive only when the car is traveling in one direction and the other set responsive only when the car is traveling in the other direction. Defendants' elevators have only one set of car-buttons. These are responsive when the car is traveling in either direction.

The means disclosed in the Parker patent to prevent an up car-button from stopping a down car, and vice

versa, is the arrangement of the car-button circuits through the 10-11 and 10'-11' contacts of the car-switch (Figure 3 of this brief.) The car-button circuits lead through the contacts of the car-switch, hence the up circuits for the car-buttons can only operate when the car is going up, and the down circuits for the car-buttons can only operate when the car is going down. There is no such arrangement or mode of operation in defendants' elevators. The master so found in discussing claim 41 [R. 587]. The means to prevent an up car-button from stopping a down car, and vice versa, is positively included as an element in claim 41. The master found that the defendants' elevators do not employ such means or their equivalent. The function performed by these same means is ascribed to the elements in claim 40. The finding of the master that claim 40 is infringed, but that claim 41 is not infringed, demonstrates the fallacy of the master in finding infringement based on a comparison of function only, apart from the means employed.

The elements of claim 40 are found in Strohm (Exhibit X-10) as follows:-

A control system for an elevator car A comprising a plurality of stop switches (buttons B and C), one for each of a plurality of landings, a plurality of additional stop switches (buttons D and E), one for each of said landings, start control switching mechanism (car switch 85) and car actuating and stopping mechanism (valve 44, rack 43, piston and cylinder 41, 42, valve magnet H, and control magnet f for the up direction, and valve magnet I and control magnet g for the down direction), responsive to the first named stop switches (push buttons B and C) to stop the car at the landings corresponding to said first named stop switches operated only when

the car is traveling in one direction (buttons B and C will stop the car only when it is traveling in the up direction with the right-hand shoe G retracted and left-hand shoe G capable of engaging switches 29, responsive to said additional stop switches (buttons D and E) to stop the car at the landings corresponding to said additional stop switches operating only when the car is traveling in the other direction (buttons D and E will stop the car only when it is traveling in the down direction with the right-hand shoe G projected and left-hand shoe G retracted), responsive to the start control switching mechanism (car switch 85) to start the car.

The report of the special master found that claim 41 is not infringed [R. 587, 590]. Plaintiff filed no exception to this finding. No contention was made before the district court that claim 41 is infringed [R. p. 549]. This claim is not before this Court on this appeal. (*Riverside Heights Orange Growers' Ass'n v. Stebler*, 240 Fed. 703, at 706 – C. C. A. 9th Cir.)

Claim 65 is similar to claims 40 and 41 in specifying that one set of buttons shall respond only when the car is moving in one direction and that the other set of buttons shall respond only when the car is moving in the other direction. Claim 65 adds a clause, not contained in the other claims, specifying that the buttons function in the manner stated,

"regardless of the position of the car when the various first named and additional switches are operated or the relative order in which the various first named and additional switches are operated."

The finding of the master, made in connection with claim 41, that the defendants' elevators do not employ any

equivalent for the means of the Parker patent that prevent the up buttons stopping the down car, and vice versa, requires a decision that claim 65 is not infringed. The stop-switches (push buttons) referred to in claim 65 are the car-buttons. The hall-buttons in the Parker patent will not respond to the claim. This is illustrated by the testimony of Mr. Doble [R. 456] and is illustrated by Exhibit "Y" (Figure 7 of this brief). Plaintiff's expert Sessions so admits [R. 529]. Defendants' elevators clearly do not infringe claim 65, for the same reason as stated in connection with claims 40 and 41. They do not have a set of up car-buttons responsive only when the car is moving in an up direction and a set of car-buttons responsive only when the car is moving in a down direction.

The elements of claim 65 are found in the Strohm patent (Exhibit X-10) as follows:

A control system for an elevator car A comprising a plurality of stop switches (buttons B and C on the left-hand side of Fig. 1 of Strohm), one for each of a plurality of landings, a plurality of additional stop switches (buttons D and E on the right-hand side of Fig. 1 of Strohm), one for each of said landings, and means (releasing magnet f) responsive to the first named stop switches (buttons B and C) to stop the car at the landings corresponding to whichever of these buttons is pressed only when the car is traveling in one direction (that is, when the car is moving up and the right-hand shoe G is retracted, the car will stop only in response to buttons B and C) and is responsive to the additional stop switches (buttons D and E) only when the car is traveling

down (that is, when the car is traveling down and the shoe G is retracted, the car will only stop in response to buttons D and E). The buttons B and C will stop the car during the next up trip past these floors irrespective of whether the car was above the floors or below these floors at the time that the buttons B or C were pressed. The buttons once pressed remain in the depressed condition until the car has stopped at the floor and the doors have been opened to admit the passenger who was waiting at that floor. Also, the buttons D and E will stop the car the first time it approaches the corresponding floors in the down direction, and it makes no difference whether the car was above the floors or below these floors at the time these buttons were pressed. In the Strohm patent, the elevator car will stop first at the first floor which it approaches at which a button has been operated, and will then stop at the next floor at which a button has been operated, irrespective of the order in which those buttons were pressed. That is, if the button at the third floor had been pressed first, and then the button had been pressed for the second floor, the car in moving up would stop first at the second floor and then at the third floor. Hence, the car stops at the floors in the natural order in which the car approaches the floors, and not in the order in which these buttons were actuated.

The re-issued claims cannot be held to cover any and every mechanism that might perform the functions ascribed to the means recited as elements in the claims. We have shown above that this type of claim is restricted by the settled rule to the means described in the patent and their equivalents. We have also shown that the reissued claims must be restricted to the particular form of means described in the patent, or the claims are invalid in view of the prior art. The master construed all of the re-issued claims in suit to "have no greater scope than claim 3," except claim 22, which he held covered a mere sub-combination [R. 589], saying:—

"All of the re-issued claims include language which is descriptive of the function of the Parker control and specify 'means' or use other particular language in referring to the structure. It being necessary to refer back to the specifications to determine the exact circuits and mechanism which function as described in the claim, it is found that Claims 29, 39, 40 and 65, with certain functional limitations, read upon the same combination, which is the combination of Claim 3. Claim 41 is narrowed by the addition of other descriptive matter. Claim 22 covers a subcombination." [R. 573.]

If it is necessary to restrict the scope of the reissued claims to the scope of claim 3, obviously the reissued claims are not infringed if claim 3 is not infringed. The master erred in finding the claims infringed because he misapplied claim 3 to defendants' elevators. We have already shown that claim 3 contains express limitations that do not exist in defendants' elevators and that these limitations cannot be disregarded.

Judge James found no necessity for considering the details of the claims in issue. If the claims are considered specially, none of them are infringed, for the reasons we have stated. It is unnecessary to specially consider the claims, because the defendants' elevators do not embody that substantial identity with the Parker patent which is made essential by the settled law before infringement can be found, irrespective of the form of the claims.—

"It is no longer necessary to multiply citations to show that claims are to be construed in the light of the contribution to knowledge actually made by the inventor, or that mere ability to fit to a thing the words of a claim does not prove infringement. Let it be assumed that (e. g.) the first claim, at least, will 'read on' defendant's system; it remains to inquire whether that (and other) claims, construed consistently with the patentee's actual achievement, justify the finding that there has been that substantial appropriation which is always the essence of the tort known as infringement."

(Electro-Dynamic Co. v. United States L. & H. Corp., 278 Fed. 80, at 84 - C. C. A. 2.)

INTERVENING RIGHTS.

There is a special principle of patent law applicable to re-issue patents which provides that the re-issue claims cannot be asserted against a defendant who enters the field subsequent to the grant of the original patent and prior to the application for the re-issue, assuming, of course, that the claims of the original patent were not broad enough to cover the defendant. This principle is known as the doctrine of "Intervening Rights". This defense is specially pleaded in the answer in this case [R. 18]. It is fully supported in the record.

The original Parker patent was granted August 26, 1924. The application for the re-issue patent in suit was filed on November 13, 1925. Defendants' allegedly infringing elevator system was installed in the No. 4 car of the Petroleum Securities Building and placed in operation on August 4, 1925 [R. 375]. The drawings employed in this installation are dated from April, 1925 to June 18, 1925, and are in evidence as Exhibits S-1 to S-9. DeCamp's report of August 4, 1925, covering the completed test of this installation, is in evidence as Exhibit T. The elevator was independently designed by Messrs. Baruch, DeCamp and Walker of defendant Llewellyn Iron Works without any knowledge of the original Parker patent [R. 127, 138]. Upon completing the elevator design and before making the Petroleum Securities installation, the Llewellyn Iron Works obtained an opinion from its patent counsel that its elevator was clear of patent infringement. Mr. Baruch testifies to obtaining this opinion [R. 128]. Mr. Richard Lyon testifies that on June 26, 1925, he had a conference with Mr. Baruch at which Mr. Baruch showed

him a drawing of the proposed Petroleum Securities installation and requested him to check it against all patents on elevators. He found a reference to the original Parker patent in his office-file and immediately wired to Washington for a copy of the application papers on which the patent was granted. This was received on July 13, 1925 [R. 491, 492]. The drawing of the proposed elevator was delivered with a memorandum. This memorandum is dated June 26, 1925, and is in evidence as Exhibit BB. The letter forwarding the file-history of the original Parker patent from Washington is dated July 8, 1925, and is in evidence as Exhibit Z [R., Vol. 3, p. 410]. From his study of the original Parker patent and its file-wrapper, Mr. Lyon advised the Llewellyn Iron Works that in his opinion its proposed elevator was clear of infringement of the Parker patent [R. 493-41.

"I explained that it embodied a master switch within the car, which was, I think as I explained it, electrically latched in running position, and was interrupted or was released by the floor selector to stop the car; that it was the apparent intention of the patentee to take a lever type elevator and latch the lever in one position when the car was started, and release it automatically to stop the car. And I pointed out to him how that conception was embodied in the original claims.

"I showed him the push-button arrangement and explained that it was released automatically by setting up a series of buttons in the car and various ones at each landing.

* * * * * * *

"Mr. Baruch was not very much interested in the patent. He explained to me that as far as the push-

button end of it was concerned, push-button elevators were old practice and he couldn't see any resemblance in the push-button type and the way that the push-button type was connected in this system, and the investigation was simply dropped at that point."

[R. 501.]

Based on the successful demonstration with the No. 4 car in the Petroleum Securities Building, and in accordance with the opinion of its attorneys that the system involved no patent infringement, the defendant Llewellyn Iron Works secured the contract for installing the allegedly infringing elevators in the new Pacific Finance Building [R. 131]. The drawings for the Pacific Finance elevators are dated October 22, 1925, and are in evidence as Exhibits U-5 to U-15 [R., Vol. 3, pp. 220-230].

The construction of the elevators was started immediately; prior to November 13, 1925, (the date of the application for the re-issue patent in suit,) approximately 800 hours of shop work had been done [R. 384]. The bills for material for this work are in evidence as Exhibits U-1 to U-4 [R., Vol. 3, pp. 212-18]. The timecards for this work were produced at the trial [R., Vol. 1, p. 391]. The first car in the Pacific Finance Building was completed and turned over to the building for regular operation on March 4, 1926 [R. 277]. This was prior to the date of the grant of the re-issue patent in suit. The installation of the other three cars was carried forward rapidly and the last car turned over to the building and put in regular operation on May 11, 1926 [R. 393].

Prior to the application for the re-issue patent in suit, the plaintiff inspected the No. 4 car in the Petroleum

Securities Building and observed the operation of defendants' elevator. This is established by the testimony of the witnesses Gaylord and Keller. Gaylord was at that time the manager in Los Angeles for the Elevator Supplies Company. That company furnished the signal machines employed in the Petroleum Securities Building. In July of 1925 Mr. Sauter, of the Otis Elevator Company, asked Mr. Gaylord to take him over to see this equipment. Mr. Sauter was accompanied on this inspection by two other representatives of plaintiff, Mr. Keller and Mr. Selenta [R. 423]. Gaylord testified that Sauter wished to see the signal equipment and also wished to see the equipment on the No. 4 elevator [R. 427]. He says they rode up and down in the No. 4 car and observed the operation of the car-buttons [R. 423-4]. They also examined the equipment in the pent-house [R. 428]. He says they showed him the wires leading from the signal machine to the control panel [R. 429]. Mr. Gaylord was a reluctant witness and it was necessary for the defendants to secure his testimony by subpoena. Plaintiff did not deny that it made this inspection at the time testified to by Mr. Gaylord. Mr. Keller was produced as a witness, but neither Mr. Selenta nor Mr. Sauter was produced. Keller admitted they made the visit testified to by Gaylord, and made no substantial contradiction of Gaylord's testimony. He asserted that the automatic slow down and stopping machine was encased in a metal cover [R. 513], but this was shown to be mistaken, by the subsequent testimony of Mr. De-Camp, who produced the original record for the construction of this cover and established that this cover was not made for some months after the inspection of

the elevator by plaintiff's representatives [R. 504-5, 546]. Evidently Keller made more than one visit to inspect the No. 4 car in the Petroleum Securities Building.

The record clearly establishes that defendants' alleged infringing elevators were designed before the application for the re-issue patent in suit. One of these elevators was completed and placed in use before the application for the re-issue was filed. The elevators were placed on sale after the defendant had secured the advice of counsel that it did not infringe the original Parker patent and before the application for the re-issue was filed. The alleged infringing elevators were completed and the first of them installed in the Pacific Finance Building before the grant of the re-issue patent. Because of these Intervening Rights, the re-issue claims cannot be successfully asserted in this case.

The authorities on "Intervening Rights" are reviewed by the Circuit Court of Appeals for the Sixth Circuit in the case of Ashland Fire Brick Co. v. General Refractories Co., 27 Fed. (2d) 744. In that case the original patent was granted July 3, 1923, and the application for re-issue filed July 2, 1924, one year lacking one day after the grant of the original patent. The reissue made no change in the original patent except to add a single broader claim. On September 24, 1923, the defendant submitted blue prints of its proposed machine to its counsel and on October 5, 1923, was advised by its counsel that the machine involved no infringement of the original patent. The defendant completed construction of a machine on January 1, 1924. Another machine was completed on May 8, 1924. Both were put to immediate

use. For these reasons the court dismissed the bill of complaint, saying (p. 746):-

"The doctrine of intervening right, as a defense in an infringement case based upon a reissue patent, has never been elaborated by the Supreme Court; its nature and force must be picked out from the various assumptions of its existence and more or less incidental applications of it which that court has made. After a further study, as thorough and careful as we can make, the court as now constituted finds itself satisfied to accept and act upon and to adopt the general line of discussion found in the American-Porter case, and to hold, as we now do, that, because the claims of the original patent were limited as to the form of conveyor, and because after the issue of the original patent and with knowledge of it and expressly appreciating its limited character, indeed, being governed therein by the advice of patent counsel, the defendant built a non-infringing brick machine, and still before the re-issue application another one, at a substantial expense, and put them into commercial use on a large scale by extensively selling their product, and thus made them substantially material to its manufacturing business, the defendant thereby acquired at least a right to continue to use these two machines as if it held a license therefor under the reissued patent." (citing):

"Mahn v. Harwood, 112 U. S. 354, 361, 5 S. Ct. 174, 6 S. Ct. 451, 28 L. Ed. 665; Coon v. Wilson, 113 U. S. 268, 5 S. Ct. 537, 28 L. Ed. 963; Parker Co. v. Yale Co., 123 U. S. 87, 8 S. Ct. 38, 31 L. Ed. 100; Topliff v. Topliff, 145 U. S. 156, 165, 169, 12 S. Ct. 825, 36 L. Ed. 658; Autopiano Co. v. American Co. (C. C. A. 2), 222 F. 276, 282; Keller v. Adams Co. (C. C. A. 9), 287 F. 838; Supreme Co. v. Security Co. (C. C. A. 9), 299 F. 65."

In Keller v. Adams-Campbell Co., 287 Fed. 838, this Court held that the defendant, who, after originating a device and then learning of complainants' patent, submitted its device to attorneys, and on their assurance that it did not infringe, placed it on the market, acquired intervening rights entitling it to protection from a re-issue of the original patent. These intervening rights were held to entitle the defendant to continue in the business of manufacturing and selling after the grant of the re-issue patent. The reasons for this ruling were stated in the opinion of Judge Ross as follows:—

"The evidence shows that, prior to any knowledge on their part of the Keller patent, the appellees had been working on their device, and had made and sold a few of them, but subsequently learned of and became familiar with the original Keller patent, and before proceeding with the manufacture and sale of their own device, and prior to the making of the application for the reissued Keller patent, they applied to the attorneys who procured the original Keller patent for information as to whether their device was an infringement upon that of Keller, saying that they did not wish to infringe, and, being told that it would not be an infringement, they proceeded with the manufacture and sale of their own on a substantial basis. We therefore think it clear that the appellees had and have such intervening rights as were properly protected by the court below. See Coon v. Wilson, 113 U. S. 268, 5 Sup. Ct. 537, 28 L. Ed. 963; Topliff v. Topliff, 145 U. S. 156, 12 Sup. Ct. 825, 36 L. Ed. 658; Dunham v. Dennison, 154 U. S. 103, 111, 14 Sup. Ct. 986, 38 L. Ed. 924; Auto-Piano Co. v. American Player Action Co., 222 Fed. 276, 138 C. C. A. 38." (p. 841.)

The Supreme Court granted a writ of *certiorari* to review this decision and subsequently dismissed the writ (264 U. S. 314; 68 L. ed. 705). This was because the Supreme Court found that the decision of this Court could be affirmed upon the ground of non-infringement irrespective of the doctrine of intervening rights. Nevertheless, the intervening rights of the defendant was one ground for the decision of this Court, and the rule of intervening rights as there stated remains the law of this Circuit until it is modified or reversed.—

"Counsel for the petitioner here insists that this statement was not necessary to the decision because the conclusion in that case was clearly made to depend on the non-infringement of the patent and that the reference to sec. 3477 could only be regarded as obiter dictum. It does not make a reason given for a conclusion in a case obiter dictum, because it is only one of two reason for the same conclusion. It is true that in this case the other reason was more dwelt upon and perhaps it was more fully argued and considered than sec. 3477, but we cannot hold that the use of the section in the opinion is not to be regarded as authority except by directly reversing the decision in that case on that point, which we do not wish to do."

(Richmond Screw Anchor Co. v. United States, 275 U. S. 331, 72 L. ed. 303, at 306.)

In Supreme Mfg. Corp. v. Security Mfg. Co., 229 Fed. 65, this Court again ruled that one who has acquired intervening rights between the time of issuance of an original patent and the application for a reissue, cannot be charged with infringement of broader claims of the reissue patent. These intervening rights were held to en-

title the defendant to continue in the business of manufacturing and selling subsequent to the grant of the reissue patent. The reasons given by this Court for its decision are stated in the opinion of Judge Gilbert as follows (p. 68-9):-

"The appellant here has intervening rights as against the reissue, for it has acquired the right to manufacture and sell that which Ells failed to claim, and, having expended considerable sums of money in the manufacture of a device at a time when the original Ells patent was as yet unsurrendered, it cannot be held to infringe the added claims of the reissue. Ives v. Sargent, 119 U. S. 652, 7 Sup. Ct. 436, 30 L. Ed. 544; Autopiano Co. v. American Player Action Co., 222 Fed. 276, 138 C. C. A. 38; Diamond Drill Contracting Co. v. Mitchell (C. C. A.), 269 Fed. 261; Keller v. Adams-Campbell Co. (C. C. A.), 287 Fed. 838; Ashley v. Samuel C. Tatum Co. (D. C.), 240 Fed. 979."

In Wichita Visible Gasoline Pump Co. v. Clear Vision Pump Co., 19 Fed. (2d) 435, the Circuit Court of Appeals for the Eighth Circuit held that a re-issue patent, applied for nearly twenty-one months after the issuance of the original patent, after others had perfected and were manufacturing a device that did not infringe the original patent, was invalid. The two leading decisions of the Supreme Court upon the doctrine of intervening rights were referred to in the opinion of the Circuit Court of Appeals as follows (p. 437):-

"Thus, in Parker & Whipple Co. v. Yale Clock Co., 123 U. S. 87, 8 S. Ct. 38, 31 L. Ed. 100, there was a delay of only one year and eight months, but it appeared that the improvements not covered by

the original patent had been brought into use by others than the patentee before the issue was applied for. In Coon v. Wilson, 113 U. S. 268, 5 S. Ct. 537, 28 L. Ed. 963, this language occurs:

"'A reissue was applied for a little over three months after the original patent was granted; but the patentee waited until the defendants produced their device and then applied for such enlarged claims as to embrace (this device) which was not covered by the claim of the original patent; and * * * it (was) apparent, from a comparison of the two patents, that the application for a reissue was made merely to enlarge the scope of the original."

In Bull Dog Floor Clip Co. v. Munson Mfg. Co., 19 Fed. (2d) 43, the Circuit Court of Appeals for the Eighth Circuit held that articles which constitute an infringement of a re-issue patent, but not the original, and which were manufactured before the re-issue was granted, may be sold after the grant of the reissue without liability. In that case the original patent was granted June 14, 1921, and the reissue patent granted July 29, 1924. The date of the application for the reissue is not stated. In the summer of 1922 the defendant obtained the opinion of its attorneys and made 50,000 clips which were sold after the grant of the reissue patent. The court held that under these circumstances the defendant had a right to sell the clips after the grant of the re-issue.

See, also:

Tropic-Aire, Inc., v. Sears, Roebuck & Co., 44 Fed. (2d) 580, at 593 - (C. C. A. 8th Cir.); Otis Elevator Co. v. Atlantic Elevator Co., 47 Fed. (2d) 545 (C. C. A. 2nd Cir.);

Moto Meter Gauge & Equipment Co. v. E. A. Laboratories, 55 Fed. (2d) 936, 940.

To escape the defense of Intervening Rights, the master limited the scope of the re-issue claims to the scope of claim 3 of the original patent. The defense of Intervening Rights does not apply where the re-issue claims are no broader than the claims of the original patent. (Abercrombie & Fitch Co. v. Baldwin, 245 U. S. 198, 62 L. ed. 240.) Judge James did not pass upon this defense. It need not be passed upon by this Court if the re-issue claims are held to have no broader scope than claim 3 of the original patent. So construed, none of the claims are infringed by defendants' elevators. The Intervening Rights of defendants in this case are important because they preclude any broader scope being accorded to the re-issue claims than can be accorded to claim 3 of the original patent. Plaintiff purchased the original Parker patent on November 12, 1925 [R., Vol. 1, p. 79; Vol. 2, p. 29]. The application for the reissue was executed on the same day [R., Vol. 3, pp. 3, 22]. The only reason given by plaintiff to Parker when plaintiff requested Parker to execute the reissue application was the desire of plaintiff to secure broader claims [R. 98]. The law requires an application for a re-issue to be accompanied by an oath setting forth the reasons why the original patent is deemed invalid or inoperative. The only reason ascribed in the oath accompanying the application for the re-issue patent in suit is "that the claims are not of sufficient scope adequately and fully to describe the invention made by the deponent to its complete extent and breadth" [R., Vol. 3, p. 22].

THE DISCLAIMER DEFENSE.

The Intentional Delay of Plaintiff in Disclaiming Claim 37 Bars Plaintiff From the Curative Provisions of R. S. U. S. §4917 and §4922, and, Consequently, the Parker Reissue Patent Is Totally Void.

This defense was presented by a Motion to Dismiss [R. 622-627] and is to be determined totally independent of all other issues in the case. It is specially before this Court on the following cross-assignment of error:

"That the Court erred in denying the motion of defendants to dismiss the bill of complaint herein on the ground that plaintiff unduly delayed filing its disclaimer as to claim 37 of said Reissue Letters Patent." [R. 659.]

If this defense is sustained, the Reissue patent in suit must be decreed totally void.

The defense arises out of the fact that no disclaimer of claim 37, found to be invalid in the report of the special master filed February 25, 1930 [R. 569-571, 590], was entered by plaintiff in the United States Patent Office until May 1, 1931 [R. 628-631], although plaintiff had acquiesced in this finding of the master and at no time sought to have the same reviewed. The motion to dismiss on this ground was brought under the authority of the decision of the Supreme Court in Ensten v. Simon Ascher & Co., 282 U. S. 445, 75 L. ed. 453, rendered February 2, 1931. In that case the District Court in Ohio had held claims 1, 3, 4 and 5 of the patent there in suit valid and infringed and claim 2 invalid. The decision of the District Court was rendered on May 24, 1922. An appeal was taken by the defendant from the finding that claims

1, 3, 4 and 5 of the patent were valid and infringed, but plaintiff did not appeal as to claim 2. On April 30, 1924, plaintiff filed disclaimer as to claim 2. In the subsequent suit (which reached the Supreme Court), a motion to dismiss the complaint, on the ground that the patent was void on its face because of this delay in entering the disclaimer, was sustained by the District Court. This decision is affirmed by the Supreme Court in its decision aforesaid rendered February 2, 1931. The opinion of the Supreme Court, written by Mr. Justice Mc-Reynolds, specifically holds that such a delay in entering a disclaimer, after the failure to seek a review of the decision holding the claim invalid, was unreasonable neglect and delay within the meaning of §§4917 and 4922 of the Revised Statutes, and that as the patent owner had thus not preserved the right to disclaim the void claim, the entire patent remained permanently invalid. The opinion of the Supreme Court states that prior to the enactment of §§4917 and 4922, a patent containing an invalid claim was wholly void and that such a patent is still wholly void unless the plaintiff complies with the provisions of §§4917 and 4922. The Supreme Court states that a patent owner fails to comply with §§4917 and 4922 of the Revised Statutes if he is guilty of unreasonable neglect or delay in entering a disclaimer in the Patent Office. The failure of a patent owner to promptly enter a disclaimer or to promptly seek to overturn a decision that a patent contains a void claim is held by the Supreme Court to constitute unreasonable neglect and delay. The decision of the Supreme Court expressly states that the provisions of §§4917 and 4922 of the Revised Statutes "were intended to protect only those who by prompt action

either seek to overturn an adverse ruling or retreat from a false position." The opinion of the Supreme Court concludes:

"Certainly, in this case where an appeal was taken by the defendants, it would have entailed no unreasonable hardship upon the patent owner promptly to have submitted the legality of the rejected claim for determination by the appellate court. The route to that end was obvious, easy, inexpensive. He deliberately failed to defend his assertion of right by appealing. He has been guilty of unreasonable delay and has not brought himself within the beneficent provisions of the statute."

We contend here that the rule announced by the Supreme Court in Ensten v. Simon Ascher & Co. applies directly to the failure of the plaintiff in this case to promptly enter a disclaimer of claim 37 following the filing of the report of the special master finding that claim void, inasmuch as the plaintiff made no attempt to have that finding of the special master reviewed or reversed by the district court when the report of the special master was argued and submitted to the court.

The motion to dismiss was denied by Judge James on the ground that the rule in Ensten v. Simon Ascher & Co. does not apply unless the delay follows the entry of a decree by the court. We contend that this is not a correct construction of the decision of the Supreme Court, and this is the question to be decided by this Court on this appeal. This question is of importance beyond this immediate case. The decision of Judge James is the first to interpret the ruling of the Supreme Court in Ensten v. Simon Ascher & Co. We would regret

any action of this Court which could be taken as directly or by implication approving the interpretation that Judge James has placed upon this decision. We emphasize this because the decree below should be affirmed on the merits irrespective of this particular defense. We ask the Court to go further and specifically indicate whether the interpretation placed by Judge James on the decision of the Supreme Court in the *Ensten* case is or is not approved by this Court.

Plaintiff did not seriously contend before Judge James, and does not seriously contend in its brief before this Court, that it was not guilty of unreasonable neglect and delay in failing to enter a disclaimer of claim 37 from February 25, 1930, (the date that it was advised by the filing of a master's report, that such claim was invalid,) until it entered its disclaimer on May 1, 1931. Plaintiff relies principally upon the contention that Revised Statutes, §§4917 and 4922 do not apply because the ground on which the master found claim 37 invalid did not, plaintiff asserts, render necessary the entry of a disclaimer of that claim. This contention was not accepted or approved by Judge James. It is impossible to sustain plaintiff's contention. It is predicated upon a totally fallacious idea of the effect of an invalid claim in a patent. If plaintiff is correct that §§4917 and 4922 of the Revised Statutes do not apply, then invalid claim 37 could not be removed from the reissue patent in suit by disclaimer and the patent must stand and be held to be permanently void. We shall first discuss plaintiff's contention and thereafter the ground for the decision of Judge James on the motion to dismiss.

Prior to 1837 a patent with an invalid claim was wholly void, and this defect effectually barred any enforcement of such monopoly because the whole grant was invalid.—

"Under the early accepted general rule a patent with an invalid claim was wholly void, and this defect effectually barred suit upon it."

(Ensten v. Simon Ascher & Co., 282 U. S. 445, 452, 75 L. ed. 453, 456.)

In 1837 a conditional curative statute was passed. This statute appears as Sections 4917 and 4922 R.S.U.S. (35 USCA Sec's 65 and 71, pp. 443, 613).

The Facts Here.

- (1) The report of the special master found claim 37 invalid.
- (2) Said report was filed February 25, 1930.
- (3) On March 17, 1930, said finding stood confirmed (*Equity Rule* 66), as plaintiff filed no exception thereto.

Notice of the invalidity of said claim 37 was thus brought home to plaintiff February 25, 1930, and confirmation of such invalidity given March 17, 1930, when such finding became absolute by plaintiff's acquiescence therein. Plaintiff's knowledge of, and formal notice to plaintiff of, such invalidity is thus established as of February 25, 1930.

(4) On October 15, 1930, this cause came on before the district court for hearing on Defendants' Exceptions to the Special Master's Report. Said

Exceptions were then argued and submitted. Plaintiff at said hearing raised no question as to the correctness of the special master's said finding of invalidity of claim 37.

(5) May 1, 1931, plaintiff filed in the U. S. Patent Office a disclaimer of claim 37. No explanation is attempted by plaintiff or shown by the record to excuse the approximately fourteen months intentional neglect and delay in filing such disclaimer.

The Issues of Law Involved.

There are two separate and distinct issues of law to be adjudged:-

First: Plaintiff's assertion that disclaimers may be divided into two classes, "proper" and "necessary", and that no disclaimer was necessary. This assertion ignores the deliberate inclusion of this invalid claim 37 as a part of the patent grant, and the rule of law that the whole grant is void because of the presence, as an integral part thereof, of such void claim.

Second: Plaintiff had knowledge as early as February 25, 1930, that claim 37 was void; the decision of the Special Master is proof of such knowledge; and plaintiff's intentional delay in filing the necessary disclaimer until approximately fourteen months thereafter (May 1, 1931), bars plaintiff from the curative provisions of the disclaimer statute.

First.

Plaintiff urges that no disclaimer was necessary because (as it asserts) said claim 37 was not adjudged invalid for the reason plaintiff claimed "more than that of which he was the original or first inventor or discoverer" or "materially more than that of which he was the first to invent," or "claimed to be the original or first inventor or discoverer of a substantial part of a thing of which he was not the original or first inventor or discoverer," (Plaintiff-Appellant's Brief, p. 171), and that

"Where a claim has been held invalid for lack of utility or indefiniteness as not complying with Section 4888, R. S., a disclaimer is 'proper' but not necessary." (Idem, p. 171 – italics plaintiff's.)

We respectfully submit plaintiff's contention is grounded upon a legal fallacy.

Prior to the enactment of the disclaimer statutes (R. S. U. S. 4917 and 4922) in 1837, the whole patent grant was invalid if a claim thereof was invalid. This rule did not depend upon the reason why such claim was invalid. Congress conceived that in exceptional cases this was an unnecessarily harsh rule. But, Congress did not abrogate the rule; it merely provided that in certain classes of cases and under certain specified conditions as to good faith, diligence, etc., the patent invalidity could be cured by disclaiming the invalid claim. But, if the invalidity were grounded upon facts or conditions not within the provisions of such section, then no disclaimer was authorized and the old rule of total invalidity remained in full force and effect. Unless, therefore, a patentee brings himself within the curative provisions of said disclaimer

statutes, if his patent is void in part, then under said well established rule, it still remains totally void.

If, therefore, plaintiff cannot bring itself within the "beneficent provisions of the statute", it necessarily follows it was and is without remedy and the reissue patent admittedly containing a void claim, is wholly void. What statute authorizes the excision of such void claim, except under the facts and conditions of said Sections 4917 and 4922? We know of none, and plaintiff refers to none.

If, as plaintiff contends, its patent was not within the provisions of these Sections 4917 and 4922, so authorizing disclaimer, then it necessarily follows its patent is not within the curative provisions thereof, and according to plaintiff's own contention its patent stands "wholly invalid." To avoid the rule of law that a patent with a void claim is wholly void, plaintiff must bring itself within the provisions of some statute authorizing the cure of such invalidity. To contend that its patent is not within Sections 4917 and 4922 is to contend the patent is wholly void. If, therefore, plaintiff can be adjudged correct in its contention that the invalidity of said claim 37 is grounded on facts or legal reasons not within Sections 4917 and 4922, plaintiff has demonstrated that its patent was and is wholly invalid and no law existed or exists authorizing a validation of any part thereof.

In Ensten v. Simon Ascher & Co. (supra) the Supreme Court (282 U. S. 452) says:-

"The statute is remedial; the intent is to aid the inventor free from wilful default or intention to mislead the public by permitting him to avoid the consequence of inadvertence, accident or mistake through prompt disavowal of the apparent right to exclude

others from something improperly included in the words of his grant. Escape is permitted only to one who acted originally in good faith and who has complied with the prescribed conditions."

As said by the Supreme Court in O'Reilly, et al. v. Morse, et al., 15 How. 62, 121 14 L. ed. 601, at 626-7:-

"Why, therefore, should he be required and permitted to disclaim in the one case and not in the other? The evil is the same if he claims more than he has invented although no other person has invented it before him. He prevents others from attempting to improve upon the manner and process which he has described in his specification—and may deter the public from using it, even if discovered. He can lawfully claim only what he has invented and described, and if he claims more his patent is void. And the judgment in this case must be against the patentee, unless he is within the Act of Congress which gives the right to disclaim."

As said by this Court in Carson v. American Smelting & Refining Co., 4 Fed. (2d) 463, at 469:-

"In Cartridge Co. v. Cartridge Co., 112 U. S. 624, 642, 5 S. Ct. 475, 485 (28 L. Ed. 828), it was said: 'A disclaimer can be made only when something has been claimed of which the patentee was not the original or first inventor, and when it is intended to limit a claim in respect to the thing so not originally or first invented."

In Union Metallic Cartridge Co. v. U. S. Cartridge Co., 112 U. S. 624, 28 L. ed. 828, at 834, it is said:-

"A disclaimer can be made only when something has been claimed of which the patentee was not the

original or first inventor, and when it is intended to limit a claim in respect to the thing so not originally or first invented. It is true, that in so disclaiming or limiting a claim, descriptive matter on which the disclaimed claim is based, may, as incidental, be erased, in aid of or as ancillary to the disclaimer. But the statute expressly limits a disclaimer to a rejection of something before claimed as new or as invented, when it was not new or invented and which the patentee or his assignee no longer chooses to claim or hold." (Italics ours.)

Plaintiff-Appellee's brief cites and quotes *Walker on Patents* (6th Ed.) Section 248, page 334, (Pl'ffs Br., p. 176). Walker says:-

"There appears to be no warrant in the statute, for disclaiming any claim which is void for want of utility, and for no other cause."

We thus find this statement fully supported by the decisions of the Supreme Court.

But plaintiff-appellee further quotes from this section of *Walker*, and italicizes the following:-

"Where a part only of the claims of a patent are void for want of utility, and for no other cause, the void claims are not injurious to the valid ones, and therefore no disclaimer is needed in any such case."

The text writer cites no authority whatsoever supporting this text. It is in direct contravention of the early established and accepted general rule of law that "a patent with an invalid claim was wholly void."

Plaintiff quotes (Br., p. 172) from Union Metallic Cartridge Co. v. U. S. Cartridge Co., 112 U. S. 624, asserting such opinion as "laying down the rule as to when disclaimers are necessary." We respectfully submit plaintiff misconstrues such opinion. The Supreme Court does not therein distinguish (as plaintiff so attempts) between disclaimers as "proper" or "necessary" or otherwise. On the contrary, the Supreme Court points out by whom and when a disclaimer is authorized and states, "But the statute expressly limits a disclaimer," etc. Thus, again there is emphasized plaintiff's error in ignoring the established rule that "a patent with an invalid claim was wholly void." Plaintiff's Brief either overlooks or fails to comprehend this rule of law to which the disclaimer statute (Sections 4917 and 4922) is a limited exception. Any disclaimer, to exercise a void claim, is a necessary disclaimer and must be authorized by Sections 4917 and 4922.

Plaintiff's Brief repeatedly refers to Sections 4917 and 4922 as "requiring" a disclaimer. It is the failure to appreciate and apply the distinction between a law requiring an affirmative act in order to preserve or maintain an existing right, and a remedial statute authorizing a curative act, (i. e., a disclaimer, under certain limited conditions and circumstances), to operate to validate an otherwise totally invalid grant, that lies at the very root of plaintiff's argument. This is again illustrated by plaintiff's reference (Br., p. 174) to the decision in Sachs v. Hartford Electric Supply Co., 47 Fed. (2d) 743. In that case the Court of Appeals, Second Circuit, said (1st col., p. 746):-

"We doubt that the disclaimers were necessary at all;",

and (col. 1, p. 747):-

"However, we do not see that these limitations were in any sense necessary to escape the prior art. A disclaimer is to abandon some part of the invention of which the patentee is not 'the first and original inventor.' If he has claimed originally too much, so that the claims are invalid under the prior art. the part disclaimed must be clearly separate in the body of the specifications; if he wishes to recast the whole, he must go to a reissue. But there is no objection to his limiting a valid patent as his fears may dictate; that does not make valid what would be invalid without it. It is a timorous retreat from positions which he could have successfully maintained. We can therefore disregard all of the disclaimer except so much as was necessary to limit claim fourteen, and so much was valid."

It is thus seen that said Court of Appeals, except as to claim 14, found that there was no invalidity requiring excision by disclaimer. As to claim 14, said Court found the disclaimer was within and authorized by the statute. But said Court of Appeals in said decision did not state that a patent containing a void claim was not wholly invalid in the absence of a disclaimer of such void claim, authorized by statute. Said Court of Appeals did not state that, in the sense in which plaintiff uses the term, there were "proper" as distinguished from "necessary" disclaimers or that any invalidity could be cured by a disclaimer not authorized by Sections 4917 and 4922.

Nor does the citation (Pl'ffs. Br., p. 175) of Section 652 (Vol. II., p. 293) of *Robinson on Patents* justify plaintiff's contention. Nowhere does Robinson use therein the term "proper" or "necessary." Robinson there says that:-

"A disclaimer filed without sufficient cause is a nullity under this as well as the former section of the act."

This is a mere statement that, if there is no necessity for a disclaimer, no invalidity to be cured, then there is nothing upon which Sections 4917 and 4922 operate.

It is to be noted that plaintiff cites no authority to its illustration (Br., p. 175):-

"When a claim has been held invalid, even in a final decree, solely for lack of utility or solely because it is indefinite, and does not comply with section 4888, R.S., no disclaimer is necessary or required, but in such a case a disclaimer may properly be filed if and whenever the patentee so elects. The remaining claims are affected only where a disclaimer was necessary."

This is directly contrary to the established rule that "a patent with an invalid claim was wholly void."

It is necessary in this connection to bear in mind that each separate claim of the patent is in effect a separate patent.—

"As the claims are the measure of the monopoly created by the patent, they are the most vital part of the specification. The statute (R.S.U.S. 4888) prescribes that the applicant 'shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention.'

"As elsewhere stated, each claim in reality is a patent in itself."

(Hopkins on Patents, Section 62, p. 119,-citing: Pope Mfg. Co. v. Gormully and Jeffrey Mfg. Co., 34 Fed. 893.)

See also:

United Nickel Co. v. California Elec. Works, 25 Fed. 475;

Celluloid Mfg. Co. v. Zylonite Brush and Comb Co., 27 Fed. 291, 294;

Hopkins on Patents, Section 119, p. 200.

As said by this Court in *Henry v. City of Los Angeles*, 255 Fed. 769, at 780:-

"As has been very recently said by the Supreme Court, referring to the claims of a patent:

"These so mark where the progress claimed by the patent begins and where it ends that they have been aptly likened to the description in a deed, which sets the bounds to the grant which it contains. It is to the claims of every patent, therefore, that we must turn when we are seeking to determine what the invention is, the exclusive use of which is given to the inventor by the grant provided for by the statute; 'he can claim nothing beyond them.' Motion Picture Patents Co. v. Universal Film Mfg. Co. et al., 243 U. S. 502, 510, 37 Sup. Ct. 416, 418, 61 L. Ed. 871, L. R. A. 1917E, 1187, Ann. Cas. 1918A, 959.'

"The court cited the Paper Bag Case, 210 U. S. 405, 28 Sup. Ct. 748, 52 L. Ed. 1122."

The claim is the operative part of a patent. The Statute (R.S.U.S. 4888) requires the patentee to "particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery." Each claim is a legal assertion of a patentable "part, improvement, or combination." Any void claim is a claim of more than that of which the patentee "was the original or first inventor or discoverer" within the meaning and scope

of Sections 4917 and 4922, and any such void claim may be disclaimed and the patent invalidity cured, if the other requirements are met. (O'Reilly v. Morse, 15 How. 62, 121 (supra)).

Justice (then Circuit Judge) Blatchford, in Schillinger v. Gunther, Fed. Cas. 12,458, says:-

"It is true, that, strictly, section 4917 contemplates only a disclaimer of some claim, or part of a claim, but, in connection with a disclaimer of a claim, or of a part of a claim, it is not improper to eliminate or withdraw, by the same writing, the parts of the body of the specification on which the disclaimed claim, or part of a claim, is founded."

Plaintiff's Brief (p. 177) asserts that in National Electric Sig. Co. v. De Forest Wireless Telegraph Co., 140 Fed. 449, Judge Wheeler distinguished between necessary and proper disclaimers, and quotes from the opinion upon the settlement of decree in that case. But plaintiff's brief fails to point out to this Court that the validity of the other claims, as to which the court (in plaintiff's quotation) said, "The doubt about those in question not held to be valid arises," etc., was not passed upon by the court. The court did not hold such other claims or any of them invalid. On the contrary, the court says (p. 455):—

"The sixth claim seems to be only for the nitric acid as new, which probably cannot be upheld, and the third, twenty-fourth, twenty-sixth, and twenty-eighth are so general as to leave their validity and application doubtful, and they are not now passed upon." (Italics ours.)

The meaning of Judge Wheeler's opinion on settlement of the decree is obviously that it was not a requisite duty of the court to determine the validity of such claims not therein passed upon in order to determine whether disclaimer was requisite to validate the patent. There is no showing in Judge Wheeler's opinion that any court had ever held such claims invalid. Obviously, the opinion, which states that "they are not now passed upon," is far from an adjudication that said claims or any one of them were void.

Plaintiff cites (Br., p. 178) Marconi Wireless Telegraph Co. v. DeForest Radio Telephone & Telegraph Co., 243 Fed. 560. The question in that case was not whether a void claim must be disclaimed to cure the invaldity of the patent. No "claim" was disclaimed. This is made clear by completing the partial quotation in plaintiff's brief:—

"The contention that Fleming's patent, whatever its original merit or lack thereof, was voided by an unlawful disclaimer, is without substance. The mistake (if there was one) was in claiming something not needed, and the disclaimer abandoned what was not wanted, without broadening or enlarging any claim; it also left the claims fully supported by the original specification. No injury to defendant, or any one else, is shown. The procedure is within Carnegie Steel Co. v. Cambria Iron Co., 185 U. S. 403, 22 Sup. Ct. 698, 46 L. Ed. 968, and our former decisions in Simplex, etc., Co. v. Pressed Steel Co., 189 Fed. 70, 110 C. C. A. 634, and Strause, etc., Co. v. Crane Co., 235 Fed. at page 129, 148 C. C. A. 620."

It is to be noted that the court says that the disclaimer there under consideration did not affect any claim of the patent. It did not disclaim any claim of the patent, but was "without broadening or enlarging any claim." This decision supports defendants' position that no disclaimer is authorized except one which measures up to and satisfies the requirements of Sections 4917 and 4922.

At p. 178 of Plaintiff-Appellee's Brief it is stated that:-

"The courts have repeatedly refused to insist on disclaimers even where the evidence shows that claims *not* in suit were invalid in view of the prior art.",

and cite, as an example thereof, Whitney v. Boston & A. R. Co., 50 Fed. 72. In that case reference as authority is made to American Bell Telephone Co. v. Spencer. 8 Fed. 509, 512, wherein the trial court says:

"The statute declares that if a patentee has claimed too much in any part of his patent he shall not recover costs, and it has been argued that certain claims of these patents, not relied on by the plaintiffs, are too broad. In this stage of the case the question of costs does not arise; but I may as well say that there is not sufficient evidence in the record to enable me to find whether these claims are valid or not, and that the statute does not mean that claims not in issue should be contested for the mere purpose of settling the costs."

In Whitney v. Boston & A. R. Co., the court cites Manufacturing Co. v. Sprague, 123 U. S. 249. But such decision has nothing whatever to do with the disclaimer statute. It is a decision as to what constitutes experimental use as distinguished from public use for profit.

Infringement of claim 37 was charged in the case at bar [R. 51]. Its validity was denied by defendants-appellees. It was in issue. Therefore, the decisions in Whitney v. Boston & A. R. Co., and National Electric Sig. Co. v. DeForest Wireless Telegraph Co. have no bearing upon the issue here to be determined. The reissue patent-in-suit included void claim 37. The whole grant was therefore invalid. If the invalidity could be obviated or cured, it could only be by application of and in accord with, and under the conditions of, the curative statute. If authorized by such law, disclaimer of the void part was "necessary." In fact, indispensable to any validity to the patent. Consideration of plaintiff's assertions demonstrates plaintiff's double error:—

- (1) If the curative statute does not apply, the whole patent was and still is irremediably void, and
- (2) If such statute applied, disclaimer was imperative and necessary, and to be effective must have been filed in accord with and justified by the provision of said *Sections 4917 and 4922*.

Second.

February 25, 1930, knowledge of the invalidity of claim 37 was brought home to plaintiff by the filing of the Special Master's report. Such finding was confirmed (Equity Rule 66) March 17, 1930, as plaintiff elected to accept as final such finding and did not seek a review thereof by excepting thereto. Furthermore, plaintiff's intentional delay is emphasized by the fact that Defendants' Exceptions to the Master's Report were argued before Judge James October 15, 1930. In this connection we call particular attention to the Transcript

of Record, Vol. 1, p. 549, from which it appears that in its printed brief before Judge James on Defendants' Exceptions to the Master's Report, plaintiff stated:-

"The plaintiff took no exceptions to the Master's final report.

"This cause, therefore, is before this court solely on the one hundred and twenty-five exceptions to the Master's report filed by the defendants. (p. 3.)

"The issues simply stated are whether the Master was right in holding—

- "(1) That claims 3, 22, 29, 40, 41 and 65 of the Parker patent are good and valid; and
- "(2) That claims 3, 22, 29, 40 and 65 of the Parker patent are infringed by the defendants. (p. 5.)"

It appears from R. 549 that in the conclusion to its said brief plaintiff urged only that the master's report be confirmed. No question was raised by plaintiff as to the correctness of the ruling of the special master as to the invalidity of claim 37 of the patent in suit. At p. 21 of its brief plaintiff stated:—

"The defendants only as (are) questioning the Master's report, * * *." [R. 550.]

Plaintiff stood on the Master's Report, but did not disclaim claim 37 until May 1, 1931. Plaintiff deliberately delayed disclaiming over one year and two months after notice of the adjudgment of claim 37 void, and one year, one month and fourteen days after such finding was confirmed, and six months and thirteen days after the said argument and submission of Defendants' Exceptions. Plaintiff "deliberately failed to defend his assertion of right by appealing. He has been guilty of unreasonable

delay and has not brought himself within the beneficent provisions of the statute." (Conclusion of opinion, in Ensten v. Simon Ascher & Co., supra.)

"When the patent has once passed through all the courts then available, the statute should have its effect; else the putatively invalid claims may remain as scare-crows, preserved against the bare possibility that at some future time they may come to life."

(R. H. Hoe & Co. v. Goss Printing Press Co., 31 Fed. (2d) 565, 566, C. C. A. 2.)

Plaintiff's whole argument is based upon what it might have done but did not do. Plaintiff might have excepted to the Master's said finding, but elected not to so do. Plaintiff asserts (Br., p. 183) that it might "have raised and argued, without taking an exception, the legal conclusion as to whether claim 37 was valid," but, as the record shows, plaintiff elected not to so do.

In the *Ensten* case, plaintiff could have appealed from the finding of invalidity of claim 2, but elected not so to do. The Supreme Court held this was deliberate action. There plaintiff "deliberately failed to defend his assertion of right" (282 U. S. 458). Here plaintiff "deliberately failed to defend his (its) assertion of right" and the test is not what right it might have had, but its deliberate election to not avail itself of any right of review,—the acquiescence in the said finding of invalidity. Even if it be granted for the sake of argument that such finding was reviewable without exception thereto, like in the Ensten case plaintiff here never sought a review thereof. "The route to that end was obvious, easy, inexpensive." (282 U. S. 458.) The fact that when the case came on before Judge James, seven months and

eighteen days later, plaintiff deliberately refrained from then "defend(ing) his assertion of right", conclusively stamps plaintiff's acquiescence in said finding as deliberate and intentional as of the date of such finding. Whatever plaintiff might have done, the fact is plaintiff did accept the Master's finding as final. The specific question reviewed in the Ensten case was whether deliberate delay and neglect existed where plaintiff had a right of review, of which it did not avail itself. The Supreme Court held plaintiff's failure to avail itself of its right of review was deliberate. The Supreme Court quoted (282 U. S. 453) from 2 Robinson, Patents, p. 284:—

"'Unreasonable delay in disclaiming is thus tantamount to an original fraudulent claim, and through it the patentee loses the privilege of making the amendment by which alone his patent could be saved. The question of unreasonable delay is a question for the court, upon the facts as found either by its own investigation or the verdict of a jury. Delay begins whenever the patentee becomes aware that he has claimed more than he has invented or described." (Italics ours.)

Plaintiff became aware upon the rendition of the Master's Report that by its patent it "claimed more than he (Parker) has invented or described." This does not require argument. The Master's Report found claim 37 void. Plaintiff accepted such finding as a final disposition of the issue of said claim's invalidity. There were no further proceedings or consideration of the validity of said claim 37. And plaintiff sought none. We respectfully submit, therefore, that plaintiff's delay in filing disclaimer of claim 37 began with plaintiff's becoming

aware of its invalidity by the filing of the Master's Report; and that, in accord with the *Ensten* decision, as plaintiff "deliberately failed to defend his assertion of right by appealing," plaintiff "has been guilty of unreasonable delay and has not brought himself within the beneficent provisions of the statute."

"But for the benign provisions of the statute, such an assertion would invalidate the whole patent; and these provisions were intended to protect only those who by prompt action either seek to overturn an adverse ruling or retreat from a false position."

(Ensten v. Simon Ascher & Co., 282 U. S. 445, 455.)

Under the rule of the Ensten case, "delay begins whenever the patentee becomes aware that he has claimed more than he has invented or described," and failure "to defend his assertion of right by appealing" is to be construed as deliberate delay, where by judicial decision notice of the invalidity is brought to the patent owner. Plaintiff here was charged with notice as of February 25, 1930, by the filing of the Master's Report, and its delay of approximately fourteen months to disclaim is under said rule intentional delay or neglect and convicts plaintiff of "unreasonable delay" under the disclaimer statute. Plaintiff cannot, therefore, bring itself within the beneficent provisions of said statute and the re-issue patent in suit remains totally void.

Under this *Statute* and the *Ensten* decision, the patentee must promptly disclaim after he becomes aware of the invalidity. The Statute does not require a court *decree* of invalidity. Whenever the patentee becomes aware of the necessity for disclaimer, prompt action is

required. There can be no dispute here as to when plaintiff knew of such necessity. Plaintiff's own actions demonstrate it was convinced of such invalidity. The decision of a judicial tribunal is evidence that at least as early as such decision the patentee had such knowledge, and the patentee becomes chargeable with notice and is obligated to act promptly if he is to bring himself within the curative provisions of the statute. The *Ensten* decision requires him to act promptly in the exercise of any right of review *or* to disclaim promptly. Here plaintiff, instead of seeking review of the master's finding, acquiesced therein and never sought a review thereof. "The route to that end was obvious, easy, inexpensive." (*Ensten case*, 282 U. S. 458.)

We respectfully submit that the record proves plaintiff was aware of the total invalidity of the re-issue, notice thereof being proven by the Master's Report, and that plaintiff's deliberate failure to promptly disclaim bars plaintiff asserting it has brought itself within the curative provisions of the Statute. As said by Judge Westenhaver, in *Ensten v. Rich-Sampliner Co.*, 13 Fed. (2d) 132, 135:

"After learning that his patent in its present form is invalid as an entirety, he is not at liberty thereafter to play fast and loose with the question of whether he will disclaim or not disclaim."

We respectfully submit that Judge James misunderstood this disclaimer statute and that his decision is based upon a fundamental error. He says:

"It would seem that where no final decree is made adjudging any claim of a patent to be invalid, the patentee is not required to disclaim." [R. 633.]

We can find no decision supporting such interpretation. Judge James refers to none. Plaintiff refers to none.

In the *Ensten case* the Supreme Court overrules the patent owner's contention that he had a right to await a final decree and appeal therefrom.—

"The petitioners say that after Judge Westenhaver by interlocutory decree declared claim 2 invalid the patentee had several options. He might have made disclaimer immediately; he might have appealed from the interlocutory decree within thirty days; he might have awaited the final decree and appealed from that; he might have sued again in another circuit and prosecuted such suit to final decree. Accordingly, they maintain that the delay which actually occurred cannot be declared unreasonable.

"Under this view, a patentee having procured allowance of an invalid claim may hold it in the face of the public for years (here nearly two years) with large possible advantage to himself and much injury to others. By the assertion of his apparent monopoly he may deter others from legitimate action and seriously prejudice the public. See Miller v. Bridgeport Brass Co., 104 U. S. 350, 355, 26 L. Ed. 783, 785." (282 U. S. 453; 75 L. Ed. 457.)

"In certain definitely defined circumstances and to the end that the mistaken but honest inventor may obtain relief from the old rule, the disclaimer provisions permit him to deprive the public temporarily of complete freedom from the assertion of a monopoly apparently valid, but not so in fact. When a competent court has declared his pretensions without sufficient foundation, we think good faith and the spirit of the enactment demand that he act with such promptness as the circumstances permit either to vindicate his position or to relieve the public from further evil effects of his false assertion. But for the benign provisions of the statute, such an assertion would invalidate the whole patent; and these provisions were intended to protect only those who by prompt action either seek to overturn an adverse ruling or retreat from a false position."

(282 U. S. 455; 75 L. Ed. 457-8.)

The Supreme Court refers to and overrules (282 U. S. 457) the decision of the Circuit Court of Appeals, Seventh Circuit, in *Excelsior Steel Furnace Co. v. F. Meyer & Bro. Co.*, 36 Fed. (2d) 449. It was the conflict of this last referred to decision with the decision of the Circuit Court of Appeals, Second Circuit, in the *Ensten* case, which induced the grant of certiorari in the Supreme Court (282 U. S. 449). The Supreme Court states the question before it:-

"Did the Patentee Ensten unreasonably neglect or delay to make disclaimer of claim 2 after May 24, 1922, when the district court in Ohio declared it invalid? He disclaimed April 30, 1924; and only the facts narrated above are relied on for explanation or excuse." (282 U. S. 452; 75 L. ed. 456.)

It is enlightening to observe that the Supreme Court says "declared it invalid" and not "decreed it invalid". The overruled contention was that a final decree of invalidity was required and that the plaintiff had a right to wait and appeal from such a final decree. The Supreme Court repeats this distinction. It says (282 U. S. 455):-

"When a competent court has declared his pretensions without sufficient foundation,"

and quotes with approval (p. 452) 2 Robinson on Patents, p. 284:-

"The same principle which forbids a patentee to assert a right to more than he has actually invented compels him to disavow the right as soon as he discovers that it has been unjustly claimed. Unreasonable delay in disclaiming is thus tantamount to an original fraudulent claim, and through it the patentee loses the privilege of making the amendment by which alone his patent could be saved. The question of unreasonable delay is a question for the court, upon the facts as found either by its own investigation or the verdict of a jury. Delay begins whenever the patentee becomes aware that he has claimed more than he has invented or described. In cases where the excess is not apparent at once upon the inspection of the patent by the patentee, the allowance of his claim by the Patent Office raises such a presumption in its favor that he may rely on its validity until a court of competent jurisdiction decides that it is broader than his real invention."

(282 U. S. 452-3; 75 L. ed. 456-7.)

In the text so cited with approval, Robinson points out that disclaimer is required "as soon as he discovers that it has been unjustly claimed." and states that in cases where the invalidity is unknown to the patentee the grant of the claim by the Patent Office raises such a presumption that the patentee is justified in relying upon validity until a court of competent jurisdiction "decides" (not decrees) the claim is broader than his real invention. And the Supreme Court says disclaimer is required at least as soon as a competent court has declared his pretensions without sufficient foundation. Neither the text-writer nor the Supreme Court requires or refers to a formal decree

nor a final decree. The principle involved is that the disclaimer statute requires excision of the invalid claim as soon as the patentee is aware of the invalidity. A decision of a competent court is evidence of such knowledge. Consideration of *Section 4917* is enlightening.—

"Whenever, through inadvertence, accident or mistake, and without fraudulent or deceptive intention,".

Section 4922 differs slightly.-

"Whenever, through inadvertence, accident, or mistake, and without any wilful default or intent to defraud or mislead the public,".

Obviously, a patentee cannot possess knowledge of the invalidity of one of his patent claims, and knowingly retain such void claim in his patent, "without fraudulent or deceptive intention" or "without any wilful default or intent to defraud or mislead the public" as to his patent monopoly.

"Unreasonable delay in disclaiming is thus tantamount to an original fraudulent claim."

(Robinson, Patents, as quoted in Ensten case, 282 U. S. at p. 453.)

The early established rule was that a patentee had a right to insist upon the validity of a claim and not disclaim it until the highest court to which it could be carried had passed upon it. (Seymour v. McCormick, 60 U. S. 96, 15 L. ed. 557; Gage v. Herring, 107 U. S. 640, 27 L. ed. 601.) Decisions of the United States Circuit Courts of Appeals being subject to review on certiorari, it therefore became the rule for such court to require either a disclaimer within thirty days after the expiration of the time for petition for certiorari or, if such petition were filed,

within thirty days after denial (if denied). R. Hoe & Co. v. Goss Printing Press Co., 31 Fed. (2d) 565 (C. C. A. 2nd Cir.). The Ensten Case originated in the decision by Judge Westenhaver in Ensten v. Rich-Sampliner Co., 13 Fed. (2) 132. Judge Westenhaver held that claim 2 was invalid. By reference to his opinion we find that the grounds of such invalidity as stated by him were that such claim was not sufficiently limited and did not define the invention that the man had made. This is exactly comparable to the master's reasons for holding claim 37 of the re-issue patent-in-suit to be invalid. At p. 135 of 13 Fed. (2d) Judge Westenhaver says:-

"Is the patentee then entitled to refrain from exercising promptly his right of review? May he reserve his decision, as to whether he will do so or not, during a period of years, insisting in the meantime on his patent as an entirety? * * * It has never been held or intimated that a patentee is not charged with a duty of acting promptly in making disclaimer after a claim is held invalid, or after he discovers that he has included in his claims something of which he was not the first or original inventor or discoverer. It seems to me that it is now incumbent upon him to determine promptly whether he will disclaim or appeal.

"It has been frequently held that mere knowledge of the invalidating prior art does not put upon him the duty of disclaiming, if he might in good faith regard his patent as valid, notwithstanding that art. In cases in which his claims have been allowed, and the lower courts have sustained their validity, it has been held that it was not negligence or unreasonable delay to refrain from making disclaimer until the reviewing court had passed thereon. See O'Reilly v.

Morse, 15 How. 120, 14 L. Ed. 601; Seymour v. McCormick, 19 How. 106, 15 L. Ed. 557; Gage v. Herring, 107 U. S. 646, 2 S. Ct. 819, 27 L. Ed. 601. This is not, however, to say that, after having been advised by a court of competent jurisdiction that this prior art does in fact invalidate certain claims, he may refrain from prosecuting an appeal therefrom within the time authorized by law. * * * In Herman v. Youngstown, it was said: 'The patent as an entity is therefore invalid in its present form.' After learning that his patent in its present form is invalid as an entirety, he is not at liberty thereafter to play fast and loose with the question of whether he will disclaim or not disclaim."

See, also:

Ensten v. Simon Ascher & Co., Inc., 38 Fed. (2d) 71 (C. C. A. 2nd. Cir.).

Plaintiff's Brief (p. 177) states:-

"If the Master was right in concluding that claim 37 of the Parker patent is indefinite and incomplete and failed to comply with Section 4888, then it never was a claim which covered an invention. It merely amounted to a paragraph of immaterial reading matter, which need not, but may be disclaimed."

The 8th claim in O'Reilly v. Morse "never was a claim which covered an invention", yet the Supreme Court held that unless the patent was validated by a disclaimer of said claim the patent remained totally void. In Wyeth v. Stone, Federal Case 18,107, Justice Story held the claim did not cover an invention but merely an abstract principle. In Herman v. Youngstown Car Mfg. Co., 191 Fed. 579 (C. C. A. 6), it was held that claims 16, 17, 18 did not

cover an invention and that the patent "in its present form" was totally invalid but could be validated by disclaimer. In the case at bar the plaintiff declared upon void claim 37 and insisted that it was infringed. There is no substantive reason differentiating claim 37 from the holdings of these decisions.

This established rule, that a patent with an invalid claim is wholly void, is entirely independent of all consideration of the other portions of the patent. The presence of a void claim determines its total invalidity. The principle is that a grant which is void in part is wholly void. Validation by disclaiming the void claim is possible only under the terms, conditions and provisions of Sections 4917 and 4922. In considering and applying this general rule, it is a moot question whether in the absence of such void claim from the patent the patent would be valid or would adequately protect the invention and the patentee. Under this general rule, the reissue patent was wholly void and could be validated only by plaintiff bringing its patent within the provisions of said disclaimer statute.

Plaintiff's argument (Br., p. 177) that claim 37 under the master's construction "never was a claim which covered an invention" is outside the principle of law under discussion. Claim 37 existed in the reissue patent. It was was one of the claims declared upon. Until the master found said claim void, plaintiff insisted upon its validity and that it was infringed by defendant. The cases abound in which one or more of the claims of a patent are held void and yet other claims are held valid and infringed, and in which the invalidity has been cured by disclaimer.

In O'Reilly v. Morse, 15 Howard, p. 62, 120; 14 L. Ed. 601, 626, it is said:

"It has been urged, on the part of the complainants, that there is no necessity for a disclaimer in a case of this kind. That it is required in those cases only in which the party commits an error in fact, in claiming something which was known before, and of which he was not the first discoverer; that in this case he was the first to discover that the motive power of electro-magnetism might be used to write at a distance; and that his error, if any, was a mistake in law, in supposing his invention, as described in his specification, authorized this broad claim of exclusive privilege; and that the claim therefore may be regarded as a nullity, and allowed to stand in the patent without a disclaimer, and without affecting the validity of the patent.

"This distinction can hardly be maintained. The Act of Congress above recited, requires that the invention shall be so described, that a person skilled in the science to which it appertains, or with which it is most nearly connected, shall be able to construct the improvement from the description given by the inventor.

"Now, in this case, there is no description but one, of a process by which signs or letters may be printed at a distance. And yet he claims the exclusive right to any other mode and any other process, although not described by him, by which the end can be accomplished, if electro-magnetism is used as the motive power. That is to say, he claims a patent for an effect produced by the use of electro-magnetism distinct from the process or machinery necessary to produce it. The words of the Acts of Congress above

quoted show that no patent can lawfully issue upon such a claim. For he claims what he has not described in the manner required by law. And a patent for such a claim is as strongly forbidden by the Act of Congress, as if some other person had invented it before him.

"Why, therefore, should he be required and permitted to disclaim in the one case and not in the other? The evil is the same if he claims more than he has invented, although no other person has invented it before him. He prevents others from attempting to improve upon the manner and process which he has described in his specification—and may deter the public from using it, even if discovered. He can lawfully claim only what he has invented and described, and if he claims more his patent is void. And the judgment in this case must be against the patentee, unless he is within the Act of Congress which gives the right to disclaim.

"The law which requires and permits him to disclaim, is not penal but remedial. It is intended for the protection of the patentee as well as the public, and ought not, therefore, to receive a construction that would restrict its operation within narrower limits than its words fairly import. It provides 'that when any patentee shall have in his specification claimed to be the first and original inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just claim to the same,' he must disclaim in order to protect so much of the claim as is legally patented.

"Whether, therefore, the patent is illegal in part because he claims more than he has sufficiently described, or more than he invented, he must in either case disclaim, in order to save the portion to which he is entitled; and he is allowed to do so when the error was committed by mistake.

"A different construction would be unjust to the public, as well as to the patentee, and defeat the manifest object of the law, and produce the very evil against which it intended to guard."

Circuit Justice Story, in Wyeth v. Stone, Federal Case No. 18,107, says:

"This leads me to say, that I cannot but consider, that the claim made in the patent for the abstract principle or art of cutting ice by means of an apparatus worked by any other power than human, is a claim founded in inadvertence and mistake of the law, and without any wilful default or intent to defraud or mislead the public, within the proviso of the ninth section. That section, it appears to me, was intended to cover inadvertences and mistakes of the law, as well as inadvertences and mistakes of fact; and, therefore, without any disclaimer, the plaintiffs might avail themselves of this part of the section to the extent of maintaining the present suit for the other parts of the invention claimed, that is, for the saw and for the cutter, and thereby protect themselves against any violation of their rights, unless there has been an unreasonable neglect or delay to file the disclaimer in the office.

if the court should grant a perpetual injunction before any disclaimer is filed, it may be, that the patentee may never afterwards, within a reasonable time, file any disclaimer, although the act certainly contemplates the neglect or delay to do so to be a good defense both at law and in equity, in every suit, brought upon the patent, to secure the rights granted thereby."

In Herman v. Youngstown Car Mfg. Co., 191 Fed. 579, the Circuit Court of Appeals, Sixth Circuit, held claims 16 and 17 of the patent invalid for lack of invention and claim 18 invalid because there was no disclosure sufficient to support the claim, and held:

"Claims 16, 17, and 18 of this patent having been found invalid, the patent as an entity is therefore invalid in its present form,"

and required a disclaimer within thirty days of filing its mandate.

In Fairbanks, Morse & Co. v. Stickney, 123 Fed. 79, the Court of Appeals, Eighth Circuit, held the 6th claim of the patent invalid, saying (p. 85):

"We are not satisfied that the sixth claim of the patent, which includes as an element the 'guard flange,' can or ought to be sustained. It cannot be sustained except by reading into it a feature of construction that is fully covered by other claims, and this we do not feel disposed to do. This claim being rejected as invalid, and no disclaimer having been filed before the suit was brought, under Section 973 of

the Revised Statutes (U. S. Comp. St. 1901, p. 703), the complainant is not entitled to recover his costs. Metallic Extraction Co. v. Brown, 49 C. C. A. 147, 150, 110 Fed. 665, 668, and cases there cited."

In Metallic Extraction Co. v. Brown, 110 Fed. 665, the Court of Appeals, Eighth Circuit, required disclaimer of claim 4, saying (p. 668):

"The claim does not contain any apt language which would suggest to a casual reader that the patentee intended to incorporate as one of the elements thereof the invention consisting of the supplemental chamber and slotted partition wall, which are covered completely by the first claim; and, in the absence of words which do clearly indicate such a purpose, we are not disposed to import into the claim a feature of construction already protected by another claim, merely for the purpose of sustaining the claim, and subjecting another to the charge of infringement. Such a method of construing the claims of a patent has often been condemned. McCarty v. Railroad Co., 160 U. S. 110, 116, 16 Sup. Ct. 240, 40 L. Ed. 358; Stearns & Co. v. Russell, 29 C. C. A. 121, 85 Fed. 218; Wilson v. Machine Co., 34 C. C. A. 280, 92 Fed. 167. In the present instance, the supplemental chamber, which, as Brown says in his specification, is the essential feature of his invention, is fully protected by his first claim, and we perceive no necessity for claiming it again in a more limited form, in connection with a carrier device, which is old in the art, nor do we believe that such was his purpose."

Judge Westenhaver in Enstein v. Rich-Sampliner Co., 13 Fed. (2d), 132 at 136, says:

"In Minerals Separation v. Butte, etc., Mining Co., 250 U. S. 336, 354, 39 S. Ct. 496, 63 L. Ed. 1019, a delay of 3 months and 17 days after final decision was excused, because the owners of the patent resided in a foreign country and war-time conditions then prevailing rendered communication slow and difficult. If foreign residence and war-time conditions must be invoked to explain a delay so brief, an unexplained delay of 2 years must certainly be held unreasonable."

In conclusion we submit that the motion to dismiss must be sustained and this suit dismissed on the ground that the patent in suit stands wholly void. Claim 37 of the patent in suit was found to be invalid by the special master. A patent containing an invalid claim is wholly void in law. Such invalidity can be cured only by a compliance with §§4917 and 4922 if those statutes apply. Defendants say that plaintiff did not comply with the statute. Plaintiff says that the statute does not apply. The court below decided against defendants' proposition. It did not sustain plaintiff's proposition. Manifestly, the patent remains wholly void unless both defendants and plaintiff are wrong. We submit that plaintiff is demonstrated to be wrong on its proposition and that defendants are shown to be right. The court below misconstrued the rule of the Supreme Court announced in Ensten v. Simon Ascher & Co. In either event, the court below erred in overruling the motion to dismiss.

CONCLUSION.

In conclusion, we submit that the decree of the District Court dismissing the bill of complaint in this case should be affirmed on any and all of the following grounds:

- (1) The defendants' elevators do not infringe the patent in suit.
- (2) The patent in suit is invalid if broadly construed.
- (3) Parker made no substantial or practical invention.
- (4) Defendants' elevators did not infringe the original patent, and the reissue claims can not be asserted against the defendants because of intervening rights.
- (5) The patent is wholly void because of plaintiff's failure to promptly enter a disclaimer of claim 37, found void by the special master.

"It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected * * *." (Pope Mfg. Co. v. Gormully, 144 U. S. 234.)

Respectfully submitted,

Frederick S. Lyon, Leonard S. Lyon, Richard F. Lyon, Attorneys for Defendants.

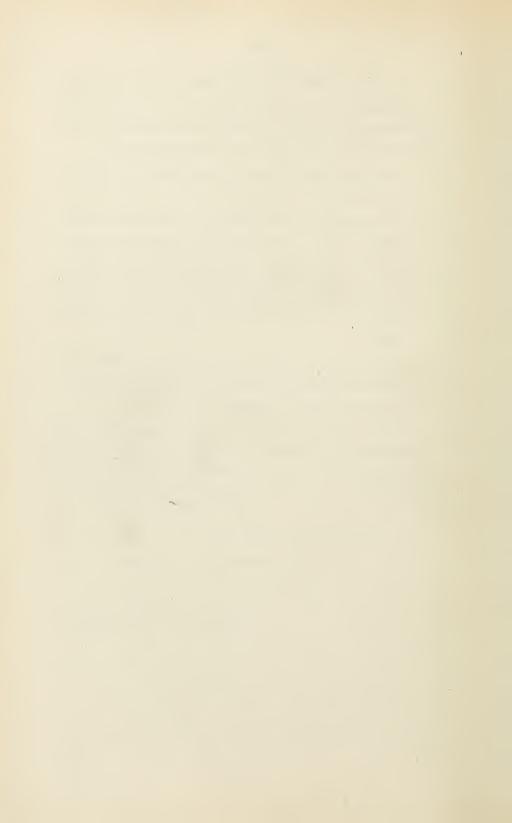
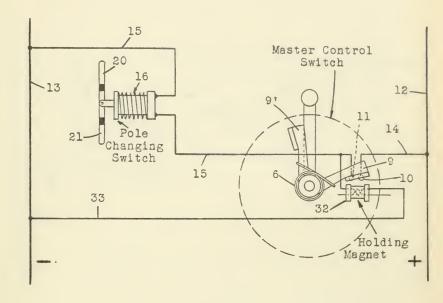


FIGURE 1-PRIMARY CIRCUIT



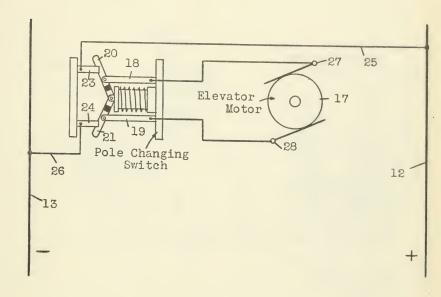
Trace: (1) Positive main 12, through contacts 10-11 of car switch, bridged by plate 9, through wire 15 to magnet 16, wire 15 to negative main 13;

Trace: (2) Also positive main 12, through contacts 10-11 of car switch, bridged by plate 9, through "up" holding magnet 32, line 33 to negative main 13.

Function: (1) To energize pole changing magnet 16. See motor circuit, Fig. 2;

(2) To energize holding magnet and maintain plate 9 of car switch bridging contacts 10-11.

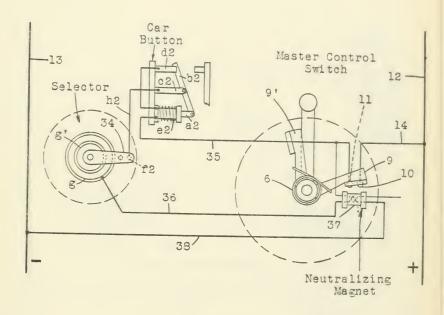
FIGURE 2 - MOTOR CIRCUIT



Trace: Positive main 12, line 25 to contacts 23 and 20 of pole changing switch, post 18 through line to brush 27, through elevator motor to brush 28, post 19 to contacts 21 and 24 of pole changing switch, line 26 to negative main 13.

Function: To drive elevator motor.

FIGURE 3 - SECONDARY CONTROL CIRCUIT (CAR BUTTON)

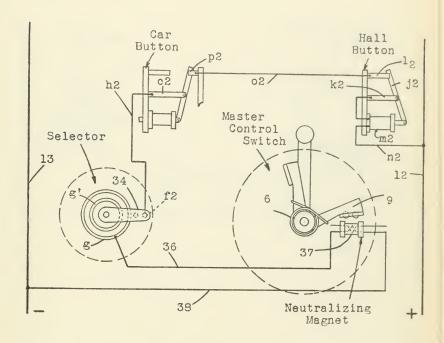


Trace: Positive main 12, line 14, car switch 10-11 and bridge 9, line 35, re-set magnet e² of car button, contacts d² and b² and post c² of car button, line h², contact f², brush 34 and ring g of selector, line 36, neutralizing magnet 37 (wound on holding magnet 32), line 38 to negative main 13.

Function: Energize releasing magnet 37 and re-set coil e², releasing magnet *immediately* releases bridge 9 disconnecting primary circuit, Fig. 1, and motor circuit, Fig. 2.

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FIGURE 4 - SECONDARY CONTROL CIRCUIT (HALL BUTTON)



Trace: Positive main 12, line n², re-set coil m², post k², contacts j² and 1² of Hail Button, line o², rear contact p² and post c² of car button, line h², contact f², arm 34 and ring g of selector, line 36, neutralizing magnet 37, line 38, to negative main 13.

Function: Energize neutralizing magnet 37 and re-set coil m², neutralizing magnet *immediately* releases bridge 9 disconnecting primary circuit, Fig. 1, and motor circuit, Fig. 2.

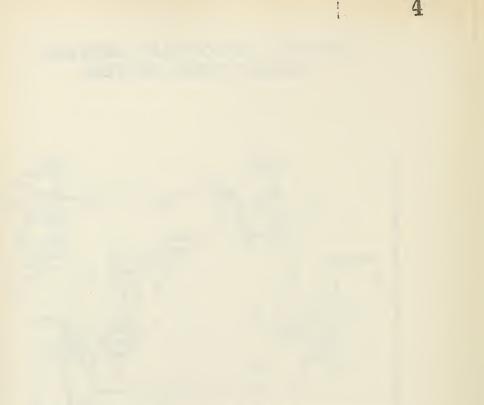
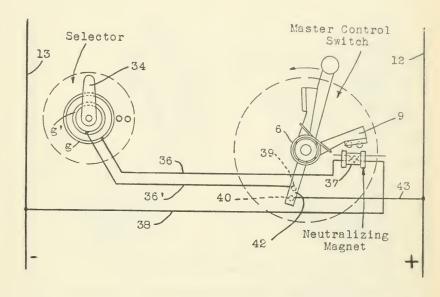


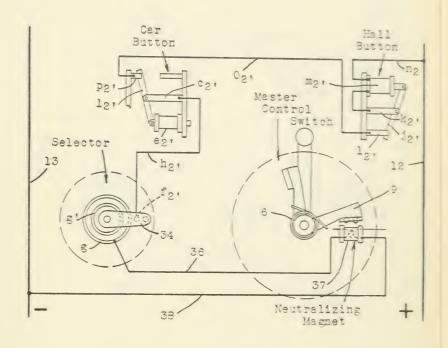
FIGURE 5 - TAIL PIECE CIRCUIT (EXHIBIT "V")



Trace: Positive Main 12, line 43, Contacts 40 and 39 bridged by Tail Piece, line 36' to ring g', brush 34 to ring g, line 36 to Neutralizing Magnet 37, line 38 to Negative Main 13.

Effect: Energize magnet 37 releasing car switch causing car to stop – Elevator inoperative.

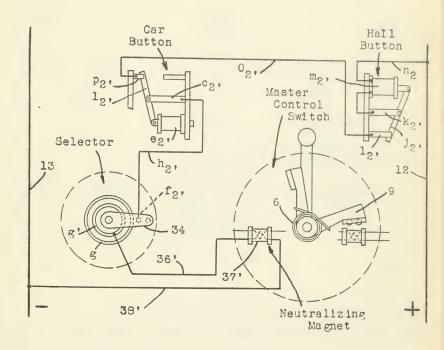
FIGURE 6 - UP TRAVEL CAR STOPPED BY DOWN BUTTON (EXHIBIT "W")



Trace: Positive main 12, line n² to Reset Coil m², Post k², Contacts j² and 1² of Down Hall Button, line 0² to Contact p² and 1² and Post c² of Car Button, line h² to Contact f², Brush 34 and Ring g of Selector, line 36 to Neutralizing Magnet 37, and line 38 to Negative Main 13.

Effect: Energizes Neutralizing Magnet 37 and stops Up travelling car by Down Button - Control System inoperative.

FIGURE 7-DOWN BUTTON RESET BY CAR GOING UP (EXHIBIT "Y")



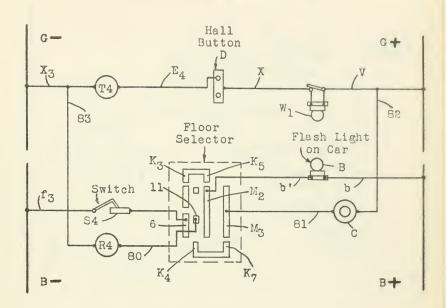
Trace: Positive Main 12, line n² to Reset Coil m², Post k², Contacts j² and 1² of Down Hall Button, line 0² to Contacts p² and 1² and post c² of Car Button, line h² to Contact f², Brush 34 and Ring g of Selector, line 36' to Neutralizing Coil 37', line 38' to Negative Main 13.

Effect: Energize Reset Magnet m² and Reset Hall Button by Up travelling car – Control system inoperative to stop car on return Down trip.

Note: Circuit not dependent on rings g and g' being connected.



FIGURE 8 - SECONDARY CONTROL CIRCUIT (SMALLEY & REINERS)



Trace: (1) Generator positive G+ to line V, thru W¹ (Night Bell), line X to Hall Button (4th floor), line E⁴ thru Magnet T⁴ line X² to generator negative G−.

Function: Energize magnet T⁴ which closes switch S⁴. See Circuit (2).

Trace: (2) Battery positive B+ line b to Flash Light B, line b' to strip M² and contact 6 of Floor Selector (to be connected by bridge K³-K⁵, to Switch S⁴ and line f³ to Battery negative B-.

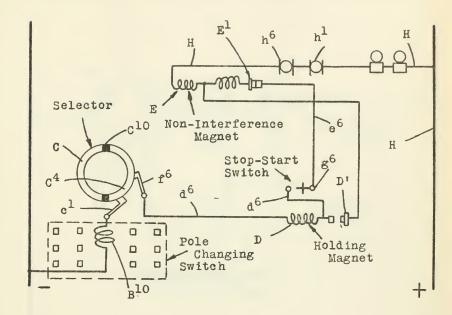
Function: Energize Flash Light B on car to instruct operator to return Car Switch to Neutral and stop car.

Trace: (3) Generator positive G+, line 82, button C,

Trace: (3) Generator positive G+, fine 82, button C, line 81, selector strip M³ and bridge K⁴-K⁻ to contact 11, line 80 to Reset Coil R⁴, line 83 to Generator minus G-.

Function: Energize Reset oil R4 and open Switch S4.

FIGURE 9 - CONTROL CIRCUITS (IHLDER)



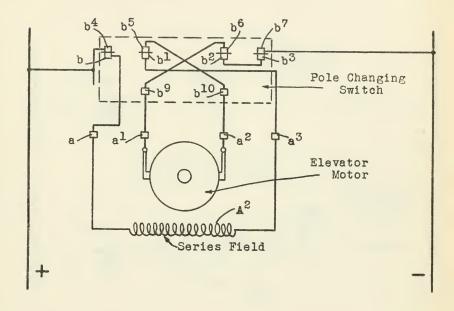
Trace: (1) Positive main, line H, contacts h¹ to h⁶ (Door contacts to prevent car starting with door open) to Non-interference Magnet E, E¹, Push Button (stop-start switch) g⁶, Holding Magnet D, line d⁶, brushes f⁶-c¹, ring C⁴ of selector, Coil B¹⁰ of Pole Changing Switch to negative main.

Function: To energize Pole Changing Switch and start car, see Figure 10, and energize Holding Magnet D, see (2).

Trace: (2) Positive main, contacts h, h⁶, coil E of Non-interference Magnet, armature D¹ (closed by circuit (1) above) and coil of Holding Magnet D, selector brushes f⁶, c¹ and ring C⁴, Coil B¹⁰ to negative main.

Function: To establish "holding circuit" and permit car to continue to run when Switch g⁶ is released.

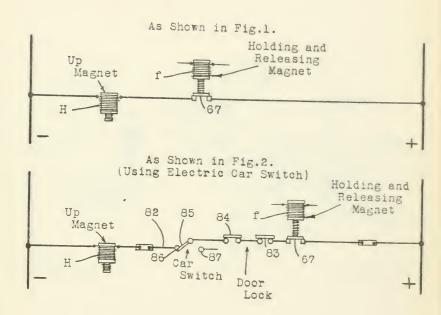
FIGURE 10 - MOTOR CIRCUIT (IHLDER)



Trace: Negative main, contacts b⁷, b³, b², b⁶, b⁹, post a¹, thru elevator motor to post a², contacts b¹⁰, b⁵, b¹ to post a³, thru series field, post a, contacts b, b⁴ to positive main.

Function: To energize elevator motor.

FIGURE 11 - PRIMARY CONTROL CIRCUITS (STROHM)



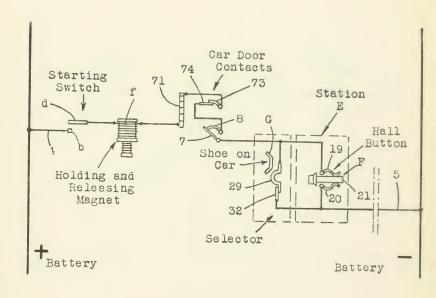
Trace: (1) Negative main to coil of Up Magnet H. thru Switch 67 of Holding and Releasing Magnet f to positive main.

Function: To energize Magnet H which operates Up valve on hydraulic elevator motor.

Trace: (2) Negative main, thru Up Magnet and fuse, thru contact 86 of Car Switch 85, thru door locks, thru Switch 67 of Holding and Releasing Magnet, thru fuse to positive main.

Function: To energize Magnet H which operates Up valve on hydraulic elevator motor.

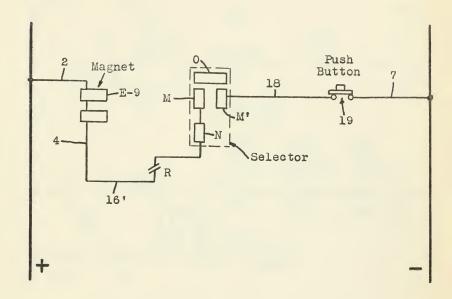
FIGURE 12 - SECONDARY CONTROL CIRCUIT (STROHM)



Trace: Battery positive, thru line 4 to contacts b and d of Starting Switch, thru Holding and Releasing Magnet f, thru safety contacts 71, 73, 74, 7, and 8 on Car, to Selector switch 29, 32, and also to Hall Button contacts 19-20, thence thru other devices (represented by break), thru line 5 to Battery minus.

Function: Energize Holding and Releasing Magnet f until Selector contacts 29, 32, are opened by Shoe on car, deenergizing Magnet f to open Primary Circuit, Figure 11.

FIGURE 13 - SECONDARY CONTROL CIRCUIT (ONGLEY)

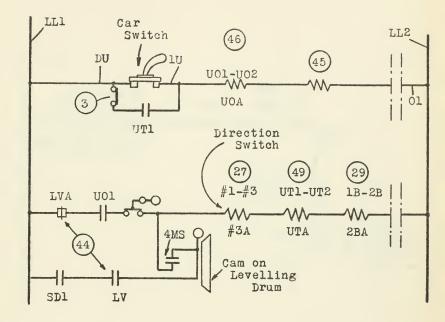


Trace: Negative Main, thru line 7 to Push Button 19, line 18 to contact M', thence by bridge 0 to contact M, line to contact N, thence to switch R (closed by valve-mechanism), lines 16' and 4 to magnet E9, line 2 to positive main.

Function: To stop car at floor by energizing magnet E9 which operates valve of hydraulic motor.

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FIGURE 14 - DEFENDANT'S RUNNING CIRCUITS



Trace: (1) Main LL1, thru line DU, thru Car Switch, thru line 1U, thru coil of relay #46, thru coil of relay #45, thru safety and auxiliary devices (represented by the break) thru line O1 to main LL2.

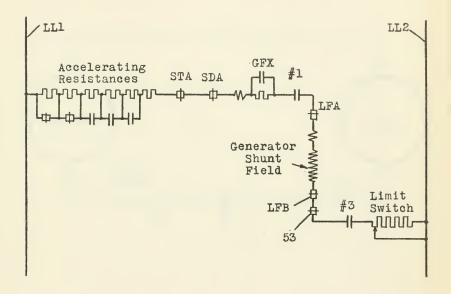
Function: Energize relays 46 and 45—relay 46 closes UO1 contact in circuit (2).

Trace: (2) Main LL1, thru contacts LVA and UO1, thru coils of relays 27, 49, and 29, to main LL2.

Function: Relay 29 releases brake from elevator motor by another circuit. Relay 27, called "Direction Switch", closes Generator Field circuit (Figure 15). Relay 49 closes contact UT1 making shunt around Car Switch.

(Note:) Circuit thru Levelling Drum now open.

FIGURE 15 - DEFENDANT'S GENERATOR FIELD ACCELERATING CIRCUIT



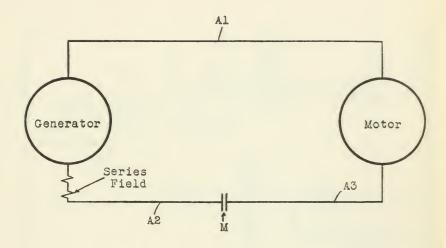
Trace: Main LL1 thru, Accelerating Resistances, thru contacts STA and SDA, thru Governor-controlled resistance GFX, thru contact #1 (of Direction Switch 27), thru contact LFA, thru Generator Shunt Field, thru contact LFB, thru contact 53, thru contact #3 (of Direction Switch 27), thru Limit Switch to main LL2.

Function: Energize Generator Shunt Field in direction to induce current in Motor Circuit (Figure 16) to start car upwardly.

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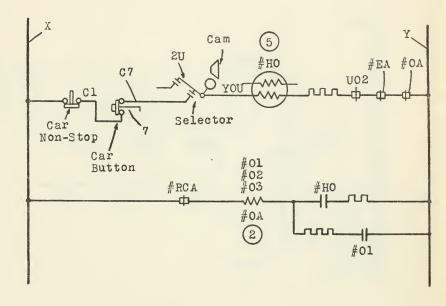
FIGURE 16 - DEFENDANT'S MOTOR CIRCUIT



Trace: Generator thru line A1 to Elevator Motor, thru line A3 to contact M of Relay 48, line A2, thru Defendants' Newly Devised Series Field, to generator.

Function: To energize elevator motor.

FIGURE 17 – DEFENDANT'S CAR BUTTON SELECTOR CIRCUIT



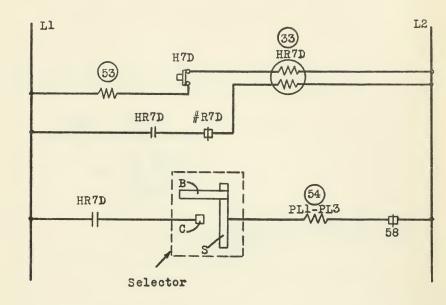
Trace: (1) Main X, thru Car Non-Stop, thru line C1, thru #7 Car Button, thru line C7, thru 2U Cam-operated switch of Selector, thru coil of relay 5, thru resistance and contacts UO2, thru #EA, and #OA to main Y.

Function: Energize Relay #5 which closes circuit (2).

Trace: (2) Main X, thru contact RCA, thru relay 2, thru contact HO to main Y.

Function: Closes circuits to Slow-Down Machine to prepare for its operation.

FIGURE 21 – DEFENDANT'S HALL BUTTON SELECTOR CIRCUIT



Trace: (1) Main L1 thru coil 53 thru seventh floor Hall Button H7D, thru coil of Relay 33 to main L2.

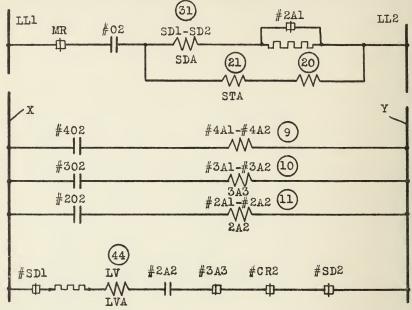
Function: Energize relay 33, which closes self-holding circuit thru its second coil (Main L1 contact HR7D thru contact #R7D thru relay 33 to main L2), and also closes contact leading to selector.

Trace: (2) Main L1 thru contact HR7D, thru contact C, thru bridge B and strip S of Selector, thru Relay 54 to L2 main.

Function: To energize relay 54 which lights operator's flash and prepares slow-down machine to operate.



FIGURE 18 - DEFENDANT'S SLOW-DOWN AND STOPPING MACHINE RELAY CIRCUITS



Trace: (1) Main LL1, thru contact MR, thru contact #O2, thru relay 31, contact #2A1, to main LL2.

Trace: (1a) Main LL1, thru contact MR, thru contact #O2, thru relays 21 and 20, to main LL2.

Function: Relays 31 and 21 prepare for insertion Decelerating Resistance (Figure 20).

Trace: (2) Main X, thru contact #402, thru relay 9, to main Y.

Trace: (3) Main X, thru contact #302, thru relay 10, to main Y.

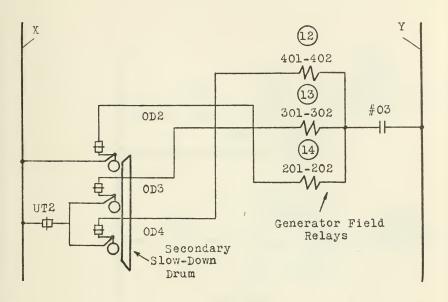
Trace: (4) Main X, thru contact #202, thru relay 11, to main Y.

Functions: Energize relays 9, 10, and 11 which are to insert resistance in generator field (Figure 20) on being deenergized.

Trace: (5) Main X, thru contact SD1, thru relay 44, thru contact #2A2 and others, including SD2, to main Y.

Function: Energize relay 44, whose contacts (Figure 14) transfer holding circuits to leveling drum.

FIGURE 19 – DEFENDANT'S SLOW-DOWN AND STOPPING MACHINE CAM CIRCUITS



Trace: (1) Main Y thru contact #03 thru relay coil 12 thru Cam-operated Switch OD4, thru contact UT2 to X main.

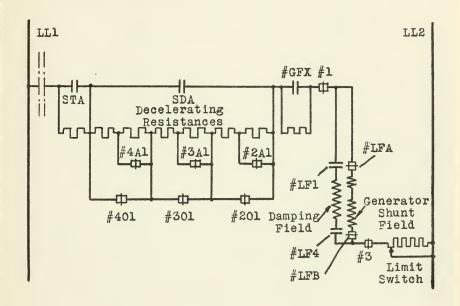
Trace: (2) Main Y thru contact #03 thru relay coil 13 thru Cam-operated Switch OD3, thru contact UT2 to X main.

Trace: (3) Main Y thru contact #O3 thru relay coil 14 thru Cam-operated Switch OD2 to X main.

Functions: Energize, respectively, relays 12, 13, and 14, which cut out resistance in Generator Field Circuit (Figure 20) – circuits operate by opening to deenergize relays to insert resistances.



FIGURE 20 - DEFENDANT'S GENERATOR FIELD DECELERATING CIRCUIT

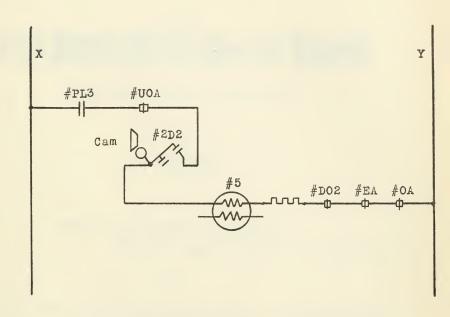


Trace: Main LL1 thru Decelerating Resistances, thru GFX, thru contact #1 of Direction Switch #27, thru contact #LFA, thru Generator Shunt Field, thru contact #LFB, thru contact #3, thru Limit Switch, to main LL2.

Function: Energize Generator Shunt Field circuit, this illustrates the insertion of step-by-step resistance and transfer of Generator Shunt Field to Damping Field.

View.

FIGURE 22 - DEFENDANT'S CIRCUIT FOR CONNECTING RANDALL MACHINE AND SLOW-DOWN MACHINE



Trace: Main X, thru contact #PL3, thru contact #UOA to second contact of #2D2 cam-operated switch, thru relay #5, thru other contacts to main Y.

Function: Energize relay #5 - circuit connects Randall Selector with Slow-Down Machine.